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CALIFORNIA ENERGY COMMISSION
AND
CALIFORNIA PUBLIC UTILITIES COMMISSION

JOINT WORKSHOP ON
PREPARATION FOR THE GOVERNOR'S POTENTIAL DECISIONS
ON OFFSHORE LNG IMPORT TERMINAL APPLICATIONS AND
LNG ACCESS ISSUES AND DELIVERABILITY OF SUPPLY
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1 P R O C E E D I N G S

2 COMMISSIONER BOYD: I'm Jim Boyd,
3 Commissioner of the Energy Commission. Chairman
4 Desmond is going to be late, and asked me to start
5 the meeting relatively on time, so we will do
6 that.

7 And I want to welcome you back. I think
8 the change in schedule has messed up several of
9 us, 9:30 yesterday, 9:00 today. Maybe we'll get a
10 few more folks, or maybe this is the group that's
11 interested in today's particular agenda.

12 Those of you who were here yesterday
13 will I hope join me in feeling that it was a very
14 interesting, very educational and very productive,
15 in terms of information we can use in the future.
16 And I look forward to the same results from
17 today's activities.

18 So, with no further ado, I'd like to
19 welcome all of you again, and welcome our panel,
20 and let Dave kick this off and introduce our panel
21 and we'll get moving and see if we can be
22 relatively on time.

23 MR. MAUL: Thank you, Commissioner Boyd.
24 Again I'm David Maul, Manager of the Natural Gas
25 Office at the California Energy Commission. With

1 me here, behind me is Harvey Morris of the
2 California Public Utilities Commission and Monica
3 Schwebs from the California Energy Commission.

4 As Commissioner Boyd said, Chairman
5 Desmond will be late, he had a conflict with a
6 conference call. And Keith Lesnick did call in,
7 his flight was further delayed and is at the hotel
8 trying to make up for his business, but he will be
9 here at 10:00 to join us for the rest of the day.

10 And also for the folks that are on the
11 webcast, listening to this, hopefully you're
12 listening right now. We did check the outgoing
13 webcast and it should be working okay, and if you
14 need to look at any of the presentations please go
15 to our main web page and click on "LNG
16 proceeding."

17 Then on the left hand page click on
18 "documents" and all of today's presentations
19 should be loaded for your downloading and viewing
20 pleasure, to go along with the audio that you're
21 hopefully hearing right now.

22 So, with that we're ready to go. Again
23 I'll remind people about malls and cell phone
24 rules, and if you have your cell phone and it
25 rings and we hear it ring it's \$5 to the lunch

1 kitty, if you answer the cellphone inside the
2 building that's \$100 to the lunch kitty, and Mary
3 back there will be happy to accept your
4 contributions to our lunch kitty.

5 So hopefully you can put your cellphone
6 on silent and we'll have a pleasant day.

7 With that, we have a lot of very good
8 speakers lined up as well today. It's been a very
9 information-rich event for us, and the staff here
10 at the commission is very appreciative and very
11 thankful to everybody who has flown out here and
12 come here to spend time with us and give us their
13 knowledge and insights and give advice to us on
14 how we can handle this important issue for
15 California and do it cooperatively with our
16 colleagues at the state and federal level.

17 With that, we're starting off with
18 Deliverability of LNG Supply, looking at the kind
19 of issues that might affect both the physical and
20 financial flow of LNG coming to our shores and
21 eventually to our customers.

22 And we're starting out with our first
23 panel, with Mark Hayes, a Research Fellow at
24 Stanford University, looking at some issues. He's
25 done a lot of research on this particular topic,

1 and we're very pleased to have Mark here.

2 He'll be followed by Roger Roue, who has
3 flown over from London, England. He's the Senior
4 Advisor at SIGTTO, the Society Internationale of
5 Gas Tanker and Terminal Operators, and Roger is
6 really quite well known in the international
7 community on these kinds of topics. We're very
8 thankful, Roger, for your time and attention here
9 today.

10 And finally, he is followed by Commander
11 Bill Drelling with the U.S. Coast Guard. We've
12 been working very closely with the U.S. Coast
13 Guard for a couple of years on LNG issues, and we
14 appreciate their advice to us and the
15 presentations that they've provided us in the
16 past. Thank you for coming today.

17 And so with that, Mark, let's go ahead
18 and get started.

19 MR. HAYES: Thanks, Dave. Thank you
20 also Commissioner Boyd and Harvey and Monica, and
21 thank you all for inviting me to speak here today.

22 As Dave said, I'm a Research Fellow at
23 the Program on Energy and Sustainable Development
24 at Stanford University, and the program has been
25 engaged in the last three years on a research

1 project with the Baker Institute at Rice
2 University looking at the history of cross border
3 gas trade projects.

4 We've examined seven different projects
5 and pairs of projects in depth. So, I'm going to
6 talk about some of those results, give you a bit
7 of historical perspective, and then also talk
8 about some of my own vies and my own research
9 looking forward on how we might think about
10 Pacific Basin trade developing, and kind of a
11 different view, what I call market security, a
12 broader view of important issues, I think, in gas
13 and gas markets, rather than just looking at
14 whether or not tankers show up on the coast.

15 So here's just an overview of the
16 projects we looked at in our historical study. A
17 lot of dots, and spanning three decades of cross
18 border gas trades.

19 There are three LNG projects that we
20 looked at, Arun (sp) dating back to the late 70's
21 in Indonesia; the Qatar gas project, which started
22 in the mid-90's, and Qatar taking gas to Japan;
23 Atlantic LNG in Trinidad; and then three other
24 sets of pipelines really, in Europe, south America
25 and North Africa.

1 In what I'm going to call the old world
2 of gas trade, which was basically the 1970's up
3 until the mid- to late- 1990's, the LNG trade was
4 really best imagined as floating pipelines. And I
5 think people talked about this a bit yesterday,
6 there were relatively few in porters, contracts
7 were rigid, take or pay clauses, and the
8 destinations were fixed.

9 The cargos moved not based on market
10 prices or variations in demand but rather, you
11 could really think of them as fixed on these
12 routes. And this was really supported by the
13 institutional arrangements in the markets that
14 were purchasing the gas.

15 In Europe and Japan you had regulated
16 monopolies or state-owned companies. They wanted
17 very stable supplies, and then could pass the full
18 cost of this security on to their customers.
19 There wasn't, it wasn't a competitive industry by
20 any means.

21 And this still exists to some degree in
22 Europe and Japan and they are still much different
23 markets than the US.

24 To plot here, the recent history of US
25 versus Japanese gas prices, and the Japanese set

1 this landed LNG, including the re-gas cost. This
2 is kind of what the wholesale market looked like.

3 And if you went back to the 80's you'd
4 see a continued price level in Japan well in
5 excess of the US, and this partially reflects the
6 cost of delivering the gas but also the
7 contractual structure in which they were
8 purchasing.

9 It was linked with oil, a very direct
10 linkage with oil prices, so the gas prices were
11 not determined on a competitive basis as in the
12 US.

13 The buyers, again, were seeking these
14 kind of secure supplies and were not necessarily
15 so concerned about competitive pricing.

16 In that world, what I called the old
17 world and up until the present, and across our
18 case studies, we did see interruption by
19 suppliers. This was kind of in the sense of are
20 the cargos going to be shipped.

21 And I think over three decades the
22 record is remarkably good in terms of actually
23 suppliers honoring their contractual commitments.
24 And then this is not a completely exhaustive list
25 of all the interruptions that have ever occurred.

1 I'm not going to go through it in
2 detail. I would point out that there's really
3 only one case of an OPEC-style embargo by a
4 supplier trying to withhold supply to drive up
5 price, an explicit strategy to achieve that.

6 And that was in Algeria in the early
7 1980's. There was a change of political
8 leadership in the country, and the leadership in
9 the gas company, and it's the time of rising
10 prices in the oil market, someone decided it would
11 be a good idea to hold back their LNG supplies and
12 try and achieve parity with the shipments, not
13 including the shipping costs even.

14 The result was really disastrous. As it
15 turned out, oil prices came down pretty quickly
16 thereafter. Algeria at the time, it's largest
17 export market was the US, and it had invested
18 heavily in liquefaction capacity.

19 The US was coming in to a glut of gas
20 supply, an economic downturn, and we just didn't
21 know, the Department of Energy said we're not
22 going to take any Algerian gas if you're gong to
23 behave this way.

24 And the result was that Algeria's
25 liquefaction capacity sat half unutilized all

1 through the 80's. There are some people that
2 connect the dots with a decade of political unrest
3 there due to this, the kind of the overhang of the
4 debt burden from this unutilized capacity.

5 The historical lesson is not good for
6 someone trying engage in this sort of behavior.
7 Beyond that, one specific case that I've looked
8 at, really the other supply obstructions are
9 caused by internal domestic conflicts, no directly
10 connected to this overt political strategy.

11 You have terrorist incidents in Algeria
12 related to domestic politics in 1997 that blew up
13 a pipeline that was going to Italy. You have
14 civil unrest in the Aceh Province of Indonesia in
15 2001 which disrupted Arun shipments of LNG.

16 And more recently you can look to
17 Argentina, where the situation of domestic price
18 controls created domestic gas shortages which then
19 put political pressure on to cut exports to Chile,
20 this was just last year.

21 So these are some bad examples, but
22 again I would point to three decades of pretty
23 reliable operation.

24 Very few technical failures, which I'm
25 not going to get in to, I think Roger is the

1 expert on that and will talk more about that.

2 I would also point out, we looked at
3 some pipeline trades that may give some insight if
4 people are concerned about gas coming through
5 Mexico via an LNG pipeline route in, and really
6 found no cases where transit countries engaged in
7 strategic behavior to interrupt gas supplies.

8 It's actually tough to execute that from
9 a technical standpoint, what are you going to do
10 with the gas. The only examples we found were
11 former Soviet Union cases where gas is exporting
12 gas through Ukraine and Belarus and selling gas
13 then at prices that didn't reflect the full value
14 of the gas.

15 So you have these kind of political
16 games going on there, but we kind of treat that as
17 not necessarily representative of a situation that
18 you might find future parties engaged in.

19 So I shift from looking at what I call
20 the old world to this new world. And I admit
21 fully that the dichotomy is not so obvious and
22 where you draw the line not so clear. But I think
23 you can say that the world where cargos move on
24 this fixed point to point trades in under fire,
25 we're seeing more flexibility, and people talked

1 about spot trading yesterday.

2 I can show you a slide that's in
3 evidence in the Atlantic Basin to show how these
4 cargos are moving. I think it's an open question
5 how the LNG trade will develop in the Pacific.

6 But my point is, really, when I'm
7 talking about security, I would emphasize more
8 emphasis on price than physical volumes for
9 security. At the end of the day the gas market's
10 already volatile, and to the extent that LNG plugs
11 in to that it affects the already existing
12 conditions in the market and how it interacts with
13 that.

14 Here is an example to show how the
15 cargos from the Atlantic LNG in Trinidad, cargos
16 shipped from that facility have tracked the price
17 differential between the US and Spain.

18 And this is an explicit contractual
19 mechanism that is agreed on by the three parties
20 involved. People are trying to follow this model,
21 they broke the mold of that fixed point to point
22 trade and other people are basically following
23 their example.

24 So the green line is the US price minus
25 the Spanish price. And when that goes negative

1 cargos tend to go to Spain. And really most of
2 the action is on the Henry Hub, the Spanish prices
3 still tend to be linked, like other European
4 prices, to oil.

5 And I should comment to you, units
6 there, that's actually LNG units. So you have
7 some conversion to do to get to BCF, but multiply
8 by 600. Anyway, I think 100,000 cubic meters of
9 LNG is something like 30 BCF or something like
10 that, but I'd have to check my math.

11 Okay. So I think, if we look at the
12 Pacific Basin and the potential for this arbitrage
13 trade, I just went to the fundamentals and said
14 "well, what are the seasonal and monthly demand
15 variations in the key markets here."

16 So in the top four lines I've taken the
17 last four years of gas consumption in the two main
18 gas using markets in the Pacific Basin, and now,
19 which would be Korea and Japan. There are some
20 others, but these are the major players in the LNG
21 trade market.

22 And plotted those each year over the 12
23 months of the gas using year. And you can see
24 seasonal variability, winter peaking, summer peak,
25 which is basically Japan's summer peak for

1 electric power generation.

2 Below those four lines I've plotted
3 California's gas use, which now doesn't include
4 any LNG directly. And you see a similar seasonal
5 trend.

6 A couple of things I would point out.
7 One, the scale of the markets is pretty similar,
8 we're going to be potentially a big player as we
9 site terminals. But also I think this kind of
10 gets to my point about price.

11 I think there's a potential for
12 arbitrage trade in the region, and that arbitrage
13 trade will be efficiency improving. The seasonal
14 variation seems to be correlated, but it's not
15 perfectly correlated.

16 So to the extent that perhaps our summer
17 peak is not as strong, or winter peak tends not to
18 be, as Japan, there are opportunities for cargos
19 to defer on an average basis every year, people to
20 make decisions, and lower cost and lower overall
21 capital investment to serve two markets. And I
22 think that's a potentially benefit.

23 Also there's kind of a year to year
24 month to month stochastic variation just by nature
25 of the predictability of gas consumption. There

1 are big swings.

2 I mean, if you just look at the
3 California difference between 2003 and 2001, the
4 far left there, the difference between the red and
5 the green line, it's 50 BCF difference in two
6 years.

7 And I don't think people could have told
8 you in November that that situation was naturally
9 going to develop. So in those situations you see
10 price impact certainly, and I think there are
11 opportunities for the LNG to respond to these kind
12 of variations in the market and how the net impact
13 of lowering volatility improving the situation.

14 Just to show, I think we talked about
15 this yesterday, the major players in the potential
16 Pacific Basin market. You have potentially
17 several LNG suppliers in the Basin, delivering
18 cargos to California.

19 My distances here are rough
20 approximations, so I wouldn't plug them into any
21 economic model.

22 So what's really driving the shift to
23 this more flexible trade. This is, again, talking
24 about territory we covered yesterday, but overall
25 the liberalization of gas and electricity markets

1 to the extent that market fundamentals are allowed
2 to show up in prices and consumers are given
3 incentives to respond in California, but also in
4 the other Pacific Basin markets.

5 What happens in Japan and in developing
6 markets in China and India will have a large
7 impact on how this kind of trade develops.

8 Declining costs of LNG and liquefaction
9 and re-gasification. To the extent you can lower
10 capital investment costs it makes it easier to
11 develop this kind of trading opportunity.

12 The growth of new markets, more players,
13 more volumes, makes it a deeper, richer market.
14 And also i think the entry of the large oil and
15 gas companies, the super majors, with equity
16 positions, balance sheet financing of the
17 projects, creates a different structure and
18 opportunity.

19 When you have more debt financed
20 utility-like projects, the ability to take
21 advantage of some of these opportunities is
22 limited.

23 So ultimately the Pacific Basin trade
24 and the flexible trade in the near future may be
25 limited. It's going to be determined by economic

1 fundamentals.

2 As I said, the market rules. And I
3 should footnote here some discussions we've been
4 having about a gas quality differentials, in terms
5 of what different buyers are looking for, can be a
6 potential constraint on this kind of fluid trading
7 between markets.

8 To come back to the price drivers, to
9 the extent, again, I'm saying that, we all know
10 that the gas prices in California and the US have
11 been highly volatile, and you could compare that
12 to price levels in Japan and Europe where there is
13 less volatility.

14 I think there are benefits to
15 integration, more LNG supplies, and I guess yo can
16 also see here, both in Japan and Europe, the
17 relative, their pricing structure is more stable
18 because of these oil-linked contracts.

19 So, in conclusion, I guess I would come
20 back to the point that I really we should be
21 focused on overall market security, not supply
22 security. Certainly supply, whether the shipments
23 arrive is an important part of the equation, but I
24 think at the end of the day consumers are
25 concerned about price, and not necessarily the

1 proper names of where the cargos come from.

2 Overall, it is I think fair to say, a
3 robust conclusion, that more LNG is going to lower
4 price levels. I'm not comfortable in saying that
5 when we bring in more LNG the volatility overall
6 is going to necessarily be lower. I think that
7 depends on fundamentals, again, of the markets
8 being interconnected with --.

9 As I said, the Pacific Basin arbitrage
10 market is going to be slow to develop but not
11 impossible, and I think that comes back to the
12 question about regulatory goals.

13 A focus on supply security, and in my
14 mind I'm thinking about something like forcing
15 buyers, or creating some kind of regulatory
16 requirement that buyers sign up for some kind of
17 long-term contracts for the majority of their
18 supplies or maybe all of their supplies.

19 I'm not sure exactly what you would
20 implement on that, but I think that could limit
21 opportunities for arbitrage, and at the end of the
22 day you can have what Japan had through the 80's
23 and 90's. You can have that system, but the net
24 impact is going to be a higher price level.

25 And certainly I think their potential

1 for market power in the liquefaction facilities,
2 and that interrelates with some of the arbitrage
3 opportunities, but I haven't been able to analyze
4 that and I'm not comfortable giving any insight on
5 that.

6 MR. MAUL: Good, Mark, thank you very
7 much.

8 COMMISSIONER BOYD: A couple of
9 questions, Mark. One of the issues that we've
10 been anxious to learn about is the open access
11 question, and although you referenced be careful
12 about regulatory goals, you didn't touch on that
13 subject, and I wonder if you would.

14 And secondly, you did reference other
15 countries like China, and the uncertainties of
16 where they're going. And I should have asked Jim
17 Jensen yesterday and I probably will later today,
18 but the question about China.

19 I realize it's a huge question and some
20 of the things he said yesterday I tend to agree
21 with, their views of their type of government.
22 But just an open question that maybe you can or
23 can't comment on about China's ability to sustain
24 the economic behavior that they're engaging in
25 now.

1 And maybe that will just remain a
2 mystery, but if you could comment I'd appreciate
3 it.

4 MR. HAYES: I guess I'll start with the
5 open access. You know, I don't, I think probably
6 other speakers have analyzed this in more detail,
7 of people that were involved in the European
8 regulatory decisions.

9 As it relates to the arbitrage
10 potentials, I think open access requirements could
11 potentially restrict some of those opportunities,
12 but how that compares to the other risks for anti-
13 competitive behavior I'm not really, I don't feel
14 comfortable passing judgment on the relative
15 weights of those considerations.

16 I'm going to be doing more analysis and
17 I'd be happy to come back on that.

18 On the China situation, a follow-on of
19 our historical work is that we're looking now at
20 China and India. It's not particularly in my
21 focus now, but just from talking to people who are
22 continuing that study, the Chinese case is real
23 interesting.

24 And I think it's still going to remain
25 an open question. I think Jim really nailed it on

1 the head yesterday, it's this interaction between
2 the old kind of command system, with the
3 government in Beijing that can do things like
4 build a west-east pipeline that is on a scale
5 unlike any pipeline projects we have done in this
6 country.

7 And they have that kind of planning and
8 state resources to put behind that. And you have
9 that interacting at the same time with a more
10 market centered coastal economy in Southeast China
11 that is looking to sign up LNG supplies.

12 It's an interesting situation. I think
13 even pessimists on China have, you know, you cut
14 the growth rate to five percent it's still a lot
15 of energy growth. So I think they're going to
16 take more gas, and the rate at which that happens
17 is open to question.

18 I think, in general, from a security
19 perspective, I think the more cargos that are
20 moving out there I think in general we'll be
21 better off in that market. There's a lot of shut-
22 in gas all along the Pacific Basin, I don't think
23 supply constraint is a real issue in natural gas.

24 Unlike maybe some issues in oil. And
25 that's kind of a long view. What happens in an

1 intermediate term is harder to figure out.

2 COMMISSIONER BOYD: Thank you.

3 MR. MORRIS: When you studied the supply
4 interruptions that occurred in the past, those
5 seem to be events that lawyers would probably call
6 force majeure events. Do you know who is
7 responsible for seeing if there could be
8 additional supplies made up for those
9 interruptions in those circumstances or what the
10 typical contract would provide in that type of
11 situation?

12 MR. HAYES: I think, as a
13 generalization, and that's kind of what we're in
14 the business of doing in the study, giving a lot
15 of specifics and then generating conclusions, I
16 think overall the experience was that suppliers
17 were pretty successful about making up for
18 technical failures or interruptions otherwise with
19 other cargos.

20 But that's, there are some notable
21 exceptions to that, and nasty litigation and
22 arbitration suits among this list as well. So
23 overall I would say that the record is positive,
24 that the suppliers would make up for the cargos
25 and there wouldn't be adverse consequences or

1 economic or legal --.

2 A lot of these projects operate in the
3 international sphere, so from a contract
4 perspective I think it is very different from the
5 history of say, long-term contracts and coal
6 deliveries in the US.

7 These contracts get re-negotiated based
8 on economic drivers and not so much on the strict
9 letter of the law.

10 MS. SCHWEBS: Mark, I have heard it
11 suggested that, particularly with Korea, there's
12 an opportunity for a seasonal trade in that the
13 California peak and the Korea peak seem to be at
14 different times.

15 Can you give us any more information
16 about that?

17 MR. HAYES: A lot of what I've learned
18 I've learned from talking to Jim Jensen, who's
19 here. We've been talking about that, and I didn't
20 break down in my chart Korea versus Japan.

21 But Korea does have a stronger winter
22 peak and Japan a stronger summer peak, so there
23 are already engaging in some -- it's perhaps not
24 called spot trading, it is more just kind of a
25 flexible arrangement.

1 And California is somewhere in-between
2 those two. We do have pretty strong winter peak,
3 but then we're, you know, the electric demand
4 growth in the summer is generating a larger, kind
5 of a sub-peak in the summer.

6 And I think, in talking to Jim I've
7 realized that the Japanese are probably perhaps
8 not quite as ready to engage in some flexible
9 trading, to partner up with the Korean market to
10 the extent that we can do that.

11 And we also, given that the bulk of our
12 supplies from the pipeline system have all their
13 storage, there's a lot of things that we can do.
14 And probably the traders here and the people who
15 are more actively engaged in the market can speak
16 to this better than I can.

17 But it's not clear that we even have to
18 plug in. At the same time we could take a lot of
19 gas and LNG in March, when Korea doesn't need it,
20 and put it in storage. Korea doesn't have that
21 storage capability.

22 And that's how things can shake out.
23 And I think if you leave it to the market to
24 figure that, they will figure out efficient
25 solutions.

1 MS. SCHWEBS: Thank you.

2 MR. MAUL: Mark, a couple of items came
3 to my mind here. You were talking about, in your
4 review of historical interruptions of supply,
5 there were no cases of a transit country exerting
6 any kind of control or interruption.

7 That may be true in the past. Is there
8 anything you can gain about how the markets are
9 changed or how countries are changed, that we
10 might look to the future? Should we look at the
11 future with the same view of the past, or
12 different?

13 MR. HAYES: In general, I think the
14 conclusion of that transit country is robust,
15 looking forward. From our case studies, and
16 taking the historical view, I think we realized,
17 or our insight is that these transit projects, the
18 countries, in many cases that's their added value,
19 is their transit position.

20 And if they somehow ruin their good will
21 as a reliable transit partner they destroy the
22 future potential benefits of more projects. So
23 the risks from a political side come when you have
24 leadership that somehow, all of the sudden
25 develops a very high discount rate on the future.

1 But otherwise, when the transit country
2 is -- there's always an allure of an expanded
3 project and more cargos and thus more transit
4 fees, so as long as people are taking a longer
5 view, that is a constraint on this kind of action.

6 MR. MAUL: I think from a California
7 perspective the countries that are important to us
8 would be either Canada or Mexico, in the event
9 that a California customer would have signed a
10 contract for a project that provided supplies
11 either through Canada or Mexico.

12 And so really the overall general rule
13 applies to only two countries of importance to
14 California.

15 MR. HAYES: Right, but -- so my
16 generalization is, LNG cargos coming through
17 Canada, the government in Ottawa is going to limit
18 any actions by a particular pipeline operator in
19 British Columbia because they realize that a good
20 chunk of their foreign exchange earnings come from
21 other natural gas sales.

22 So any particular action related to LNG
23 is a small part of a broader political calculus,
24 and I think likewise with Mexico.

25 MR. MAUL: Okay. All right, good.

1 Thank you very much. Any more questions?

2 All right, Mark, thank you very much, it
3 was a very insightful comment here.

4 Our next speaker is Roger Roue. As I
5 said, Roger is a senior advisor from Sigtto, and
6 from here from London to give us his best advice.
7 I've had the good fortune to listen to Roger in
8 other events and am very impressed with his view.

9 And so, Roger, we're looking forward to
10 your presentation today.

11 MR. ROUE: Commissioner, ladies and
12 gentlemen, good morning. And thank you very much
13 for inviting me here today to what I've found is a
14 very lovely city.

15 My presentation today, unlike most of
16 those that have gone over the last day or so, will
17 concentrate on the technical points of view and
18 not the economic points of view that have ensured
19 the integrity of the LNG supply train for the last
20 forty-odd years.

21 First of all I'll give a little
22 introduction to the organization I work for.
23 SIGTTO, the Society of International Gas Tanker
24 and Terminal Operators, is an industry body, and
25 it represents the LPG and LNG ship and terminal

1 operators.

2 Members own or operate their 159 LNG
3 carriers, with a total capacity in excess of 18
4 million cubic meters. The majority of the LNG
5 export terminals are members -- those are the
6 figures there -- as with the import terminals.

7 Virtually all of the 20 LNG carriers
8 that are due for delivery this year are owned or
9 operated by members, and as you can see we also
10 have a considerable influence in the LPG shipping
11 world and terminal world as well.

12 As I say, SIGTTO is an industry body,
13 and that's our Mission Statement. I won't bore
14 you reading it out, but we're concerned with the
15 safety of the industry.

16 But one thing, we don't get involved in
17 commercial matters, and we feel by doing that, by
18 strictly keeping to technical matters, when we say
19 something people accept it, and they don't think
20 there's a commercial benefit for one of our
21 members behind anything we say.

22 That's enough about SIGTTO. I'll now
23 give a history of the LNG transportation. The
24 first cargo was in 1959, it was an experimental
25 cargo, it was loaded in Lake Charles and

1 transported on a converted coastal liberty ship
2 across to Canvey Island, which just happens to be
3 where I live at the moment.

4 It was quite successful, it was followed
5 by another couple of cargos, and that set the
6 scene for the industry we have today.

7 In 1964 a consortium of Shell Chicago
8 stockyards, British Gas, set up a contract from
9 Algeria to Canne, they were two ships, Methane
10 Progress and Methane Princess. And they carried
11 on on that trade for just over 20 years.

12 In 1969 a liquefaction plant was built
13 in Kenai in Alaska, and that contract is still in
14 operation today. The two original ships are still
15 trading, although on different routes. They're
16 now owned by British Gas. And two new ships have
17 carried on that run from Kenai to Japan.

18 In '71 the first imports were in to
19 Boston, to the Averitt (sp) Terminal, which is
20 still in operation.

21 And then, you can see, by 1989
22 deliveries were in excess of 100 cubic meters.
23 Ten years later that had doubled, and last year it
24 was approaching 300 million cubic meters a year.

25 Some time in the next two weeks the

1 total loaded voyages that LNG carriers have made
2 safely will exceed 44,000. And I think that's
3 quite an envious safety record.

4 Unfortunately, there have been so
5 incidents. There's no point in trying to keep
6 these quiet.

7 First of all, Cleveland, which I'll go
8 into in a little bit more detail later. That
9 resulted in, I think it was 129 people being
10 killed, and it also set the LNG industry back for
11 something like ten years, it stagnated.

12 In 1979 the El Paso Paul Kayser, one of
13 the ships that Mark was talking about on the
14 Algeria to the United States run, had a high speed
15 grounding. But there was no loss of containment,
16 and it really goes to show how well those ships
17 are built and designed.

18 A year later there was another
19 grounding, of the LNG Taurus in Japan. Once
20 again, no loss of containment.

21 The Tellier, a French ship, she broke
22 out of her moorings in a storm in Algeria. There
23 was a spill of LNG onto the deck, and there was
24 deck cracking.

25 A similar incident with the Algerian

1 ship in 2002, the M. Ben Boulaid. Then of course
2 we had the Skikda explosion 18 months ago, and
3 last year we had the Tenaya Lima, which grounded
4 off North Korea.

5 One thing that we have done from these
6 incidents is that we've learned a lot. I think I
7 can go through them and I can show you that every
8 one of those has been a learning curve, and I
9 think it has increased the safety of the industry.

10 Now I'd like to -- that's the history --
11 and I'd now like to talk a bit about how this good
12 safety record was achieved. And I'll go through
13 these points one at a time.

14 Initially the standards that were set
15 were very high. They were long-term contracts
16 that you've all been hearing about over the last
17 day or so, with the buyers, the sellers, and the
18 shippers all having equity interest.

19 And as a result the hardware was well
20 designed and well built. That ship's over 30
21 years old, it's still trading. When that contract
22 -- that was the Brunite (sp) of Japan contract --
23 not only were the ships very well designed, but
24 they actually built an extra ship into the system
25 to ensure reliability of supply.

1 Now that's probably not going to happen
2 in this day and age, but they were the initial
3 standards that were set.

4 Also, a lot of money was plowed back
5 into the maintenance of these ships. It was
6 ongoing, a lot of money was spent on refits, and
7 they were kept in very good condition.

8 There were often no codes or standards
9 to design not only the ships, but also the
10 terminals. And for a number of years I worked at
11 the LNG terminal at Canvey as a maintenance
12 engineer there, and I remember looking through
13 some of the original drawings dating back to the
14 1960's.

15 And you'd open up these blueprints, and
16 in one corner would be design code, and underneath
17 would be best engineering practice. There were no
18 codes to design by, but they used best engineering
19 practice.

20 And that's paid off. That sight is
21 still in use now, albeit for propane. It was
22 built in the early 60's and it's still going.

23 Also, most of these ships were run by
24 the major oil companies, and they took the best
25 staff that they had to put on these ships, and

1 trained them to run them. So that set the
2 standard for the industry.

3 Now, technical cooperation. That's
4 another big thing. People talk to each other,
5 they pass on information, and it helps prevent
6 accidents and incidents.

7 There's various organizations, apart
8 from our own SIGTTO, that organizes and enables
9 this to take place.

10 OCIMF, which is the oil company's
11 international marine forum, which is a sister
12 organization of SIGTTO, which concentrates on the
13 oil industry, was in existence long before SIGTTO.
14 And a lot of guidelines have been written by them.

15 It's got the international safety guide
16 for all the terminals, and that is very much
17 applicable to LNG terminals as well.

18 Then there's the Gas Processors
19 Association, which is I think based here in the
20 states but has chapters all over the world. That
21 does a lot of good work in spreading information.

22 And then there's GIIGNL, which is the
23 International Gas Liquid Importers Organization,
24 based in France, which collates information and
25 passes it on to its members.

1 A lot of these organizations, they
2 organize conferences, they advise governmental
3 bodies similar to what I'm doing here today, we
4 sit on standards organizations, I work with a
5 couple of European standards committees.

6 So this is the sort of thing that we are
7 doing on the technical side, in the background.
8 Not only SIGTTO, but the other organizations as
9 well.

10 Now, back to Cleveland. A terrible
11 incident. I think probably most of you have seen
12 these photographs before. They're freely
13 available on the web. The site was built in the
14 early 1940's, I think I can say without much
15 thought to the materials of construction.

16 The drainage, fire protection separation
17 distances. A tank collapsed, it was constructed
18 of an inappropriate material. Why that material
19 was actually used I don't know, I've heard various
20 stories.

21 But the fact is it was. The tank
22 collapsed, there was a fire. The adjacent tanks,
23 these spherical tanks, which you can see are
24 supported on legs there, nowadays those legs would
25 have passive fire protection on them, in those

1 days they didn't.

2 The result was a second and third tank
3 fell over and ruptured, adding to the fire. There
4 was no proper drainage system, the LNG got into
5 the sewers and the drains. There were explosions
6 in the surrounding area, a crater in the roads.

7 All of these things now are addressed in
8 the design codes that we use today.

9 The other incident, the Tellier, the
10 French ship that broke out of its mooring in
11 Skikda, nowadays we have systems in place whereby
12 if the ship drifts more than a couple of meters
13 off the berth the loading operation is shut down,
14 valves shut, and the loading arms are
15 automatically disconnected.

16 Things like this are a result, have been
17 introduced as the result of incidents in the past.

18 Going back to this, this sort of tank
19 would never be allowed now. It's what's called a
20 single containment tank. One layer of material
21 that's resistant to the product and then
22 insulation and then some covering to protect the
23 insulation from weather.

24 Now we have double or even full
25 containment tanks, whereby if you get a leak in

1 the inner tank, which is a very rare event, you've
2 still got a secondary containment system, quite
3 often of reinforced concrete, to keep the product
4 where it needs to be. And all this has been from
5 experience.

6 Standards and codes. NFPA59A is the
7 American standard for the design of LNG terminals.
8 It's in use throughout the world. There is also a
9 European standard, EN1473. I happen to sit on the
10 working group which is currently reviewing that.

11 They are the two main standards that are
12 used throughout the world. 59A is a prescriptive
13 standard, the European standard is what we call a
14 risk-based standard, you have to demonstrate what
15 you are proposing is safe.

16 And then as far as the ships is
17 concerned, we have the IGC code, the International
18 Gas Carrier code, which was written some, nearly
19 30 years ago now by the IMO, which is the maritime
20 arm of the United Nations.

21 And then that code is interpreted by the
22 classification societies for the detailed design
23 of these ships, the likes of American bureau ship
24 in there. And that's how the ships are
25 constructed, to those classification society

1 rules.

2 The IMO also provides guidelines on
3 training for staff sailing on LNG carriers. And I
4 must admit, training and recruitment is a big
5 problem at the moment. The industry is expanding
6 very fast, and it's something which SIGTTO in
7 particular is taking a lot of interest in, to
8 improve the standards required for people serving
9 on board LNG carriers.

10 But there is a lot to help. I mean,
11 here we have a simulator, similar to what airlines
12 use for training their pilots, you can put
13 somebody in front of that and you can let them
14 load and discharge an LNG carrier. You can put
15 faults on the system, you can bring emergency
16 conditions up and so on and so forth, to ensure
17 that they know how to react in an emergency.

18 Ship vetting and inspection. Vetting, I
19 should explain, is not just the inspecting of a
20 ship to see what condition it's in, it is also the
21 inspection of a ship to ensure that it can go
22 where it's supposed to go.

23 In very simplistic terms, the first
24 thing you do is make sure there's enough water
25 alongside the berth that it actually gets there

1 and doesn't stop short.

2 But the vetting procedure, it also looks
3 to see if the ship can safely go alongside the
4 berth. If the moorings are adequate, the loading
5 system and the emergency shutdown systems, which
6 these ships are provided with, are all compatible.

7 There are also inspections by the
8 classification society for the ship. The flag
9 state of the ship, port state control, which here
10 in the states is through the USCG, and I'm sure
11 we'll hear more about later.

12 So the ships are well-inspected to
13 ensure they're up to a good standard and they can
14 actually operate where they are intended to
15 operate.

16 A lot of these operations are done under
17 written procedures, again similar to what you'd
18 find on the flight deck of an aircraft.

19 All of these ships are issued with
20 operations manuals, and the best of them, they can
21 cost up to \$200,000 a time to produce a set of
22 manuals for a ship. They show you everything you
23 need to know in great detail.

24 Operating companies also often issue a
25 safety pledge letter, which tells other

1 contractual partners that they will operate to a
2 given safety standard.

3 And there are ship-shore checklists.
4 When the ship comes alongside before cargo is
5 started there's a checklist to be undertaken and
6 checked off.

7 And normally there will be a ship-shore
8 liaison meeting between senior staff on the vessel
9 and also terminal staff, and often a member of the
10 ship operating company will send a superintendent
11 down to sit in on these meetings.

12 So everything's checked out to ensure
13 that it's being done correctly before it's
14 actually started.

15 Permits to work. These are required for
16 all non-routine procedures on most ships these
17 days. It was a system that started in the
18 terminals to ensure safe working practices and is
19 now spread on to the ships for the same reasons.

20 In conclusion I would like to say that
21 disasters are not the result of lack of
22 regulations but the lack of compliance. First and
23 foremost, it is important to enforce the rules
24 that already exist.

25 What I'm saying is it's imperative that

1 everybody in this industry plays by the rules and
2 doesn't try to take shortcuts for commercial gain
3 or whatever.

4 MR. MAUL: Thank you, Roger, very
5 helpful insights here. Questions?

6 COMMISSIONER BOYD: No, I just want to
7 thank you, Roger, that was very interesting.

8 MR. MORRIS: Yes, you indicated two
9 instances of cargo spills, one as recently as
10 2002. Why would that happen? I mean, if it's
11 secure in a storage tank on the LNG tanker why
12 would it spill, if there's a grounding, or --?

13 MR. ROUE: The first incident was the
14 French ship, the Tellier, in Skikda. There was a
15 severe storm that suddenly drifted up. The ship
16 drifted off of the berth, and the ship to shore
17 transfer, or in that case from shore to ship,
18 transfer of LNG, is through articulated arms.

19 The arms were pulled too far out and
20 failed, and LNG spilt onto the deck of the ship.
21 Okay? The latter incident was also in Skikda, it
22 was an Algerian ship. What actually happened we
23 don't know. Unfortunately, information out of
24 Algeria is often quite difficult to get
25 accurately.

1 It could have been for a number of
2 reasons. They could have not drained the arm
3 before they disconnected it. I honestly don't
4 know. As I say, unfortunately, Algeria is a
5 difficult place to get information. Any other
6 terminal in the world, we would have had the full
7 report, but there, I'm sorry, I can't tell you any
8 more, we just know that the deck was cracked, a
9 quantity of LNG was spilt on the deck and it was
10 cracked.

11 MS. SCHWEBS: As you know, Roger, in the
12 United States we have a number of deep water port
13 applicants, and quite a variation in the
14 approaches they use. Is the international
15 community working on standards for such new
16 facilities?

17 I know that Europe has a few proposed,
18 and one approved at this point too, so you're
19 seeing them as well.

20 MR. ROUE: Yeah, within Europe, the
21 European Standards Committee for EN1473, that's
22 the design of LNG terminals, and the subcommittee,
23 which looks at transfer systems, which is EN1474,
24 next year we are going to start work on guidelines
25 on offshore transfer systems for this very reason.

1 Having said that, I know American bureau
2 ship and ABS already has produced guidelines for
3 this. So there is guidance in existence.

4 MR. MAUL: Roger, it sounds like some of
5 the incidents that happened in the past have been
6 the result of people making the wrong decisions as
7 opposed to equipment failures or design failures.

8 Obviously in the history of America, or
9 in the history of the world, we have not been able
10 to keep people from making dumb decisions. How do
11 we prevent the consequences of bad decisions in
12 the future from becoming very severe?

13 MR. ROUE: I think the way we look at
14 that is to build emergency shutdown systems and
15 control systems into the operation. We now have
16 very sophisticated ESD systems at most of the
17 newer LNG terminals whereby, as I said, if the
18 ship drifts more than a couple of meters off the
19 berth the system automatically shuts down.

20 If there's a fire it shuts down, if
21 there's gas detection it shuts down. So that
22 decision making process is taken out of the hands
23 of the operator, it's done automatically.

24 The Tellier, which I've mentioned two or
25 three times before, that happened purely and

1 simply as a bad decision making process. The ship
2 had almost taken its full cargo, it wanted to sail
3 that night, the captain decided that he would keep
4 on loading although the weather conditions were
5 actually over and above those at which he should
6 have shut down, so --.

7 But that would not happen anymore,
8 because as soon as the ship started to drift
9 everything would shut down.

10 But, I mean, you can never take the
11 human element out of the equation entirely.
12 You're always going to have that, but we do the
13 best we can with automated safety systems.

14 And written procedures. You know, if
15 you've got to follow a procedure to undertake a
16 task then hopefully the operator will follow that
17 procedure and all will go according to plan.

18 MR. MAUL: Okay, Roger, thank you very
19 much for your insights and advice.

20 All right, our next speaker is Commander
21 Bill Drelling with the US Coast Guard. Bill,
22 we've benefitted from the US Coast Guard's advice
23 and the working relationship with us for the last
24 several years, and we appreciate your attendance
25 today and any more insights you have for us today.

1 MR. DRELLING: Thank you, and I want to
2 say thank for for letting us come here and talk to
3 you for a little bit. The Coast Guard always
4 likes to get the word out on what we're doing, and
5 this is an opportunity for that, not just for you
6 but for the public that's in attendance and might
7 be listening on the web.

8 I want to talk to you mainly about
9 security and the vessels and the ports in general.
10 The Coast Guard's been involved in that almost
11 since it's inception.

12 Even during World War II we were out
13 doing peace patrols and anti-submarine warfare and
14 stuff like that, so we have a long history of
15 security of ports and vessels.

16 And most of our authority comes from two
17 acts, the Magnuson Act and the Ports and Waterways
18 Safety Act. They've been in place for years, and
19 that's where we get our general authority from.

20 Since 9/11 happened though, Congress has
21 passed the Marine Transportation Security Act,
22 which basically is a comprehensive body of
23 security measures. And it's codified in 33 CFR,
24 parts 101 to 106.

25 And it specifically addresses vessel

1 security, facility security, and just general
2 security procedures overall.

3 We also have a new convention, the
4 International Ship and Port Facilities Security
5 Code, ISPS it's referred to as.

6 So in general what I'd like to do is
7 just give you an overall big picture of what
8 happens and what we do, what the tools are that a
9 captain of a port has in his bag to utilize when a
10 vessel comes in, any vessel really, it could be an
11 LNG vessel, it could be any type of a vessel.

12 First thing we did right after 9/11 we
13 put into effect a regulation requiring any vessel
14 that wants to come into the United States to give
15 us 96 hours advance notice of arrival. And that's
16 so we can prepare for it, and also screen it.

17 The contents of that notice of arrival
18 include information on the vessel itself, they
19 have to give us it's name and flag state, who the
20 owner is, who the charter is, who the operating
21 company is, as well as a classification society.

22 And what we do with that, we've got
23 years and years of experience inspecting all these
24 vessels and dealing with these owners and
25 companies and class societies, so as we have done

1 these inspections we've recorded them all into our
2 different computer systems.

3 And so we compare who's coming in to our
4 databases and look at their historical performance
5 to find out how they have been and whether
6 there've been problems with these vessels or not.

7 And depending on what we find there we
8 may do more or do less as the vessel comes in, or
9 require the vessel to do more or less.

10 They also have to give us information on
11 their voyage, and in particular their last five
12 ports of call. And what we want to do with that
13 is, we're going to look at where were they, and
14 did they come from a country that might be
15 somebody that's on the State Department's list of
16 countries that support terrorism or have they been
17 in a country or a port that we've experienced
18 problems with in the past when they've come into a
19 US port.

20 Stowaways on board, for example, or
21 something like that. So we're going to look at
22 that for the last five ports that they've been to.

23 They are required to give us information
24 on the crew members that are on board. We have to
25 get their names, their dates of birth, their

1 nationalities.

2 Information on their passports, what
3 their position is in the crew, and what their
4 duties are, as well as we want to know what port
5 they embarked the vessel on, what did they get on
6 board.

7 And we're going to compare all that
8 basically to some national security databases to
9 see if there's any bad guys on board. If there
10 are we can either -- depending on how bad they
11 are, I guess, or what the problems are with the
12 guy -- we can either require them to be secured on
13 board, not allowed off the vessel, or we can go
14 out and arrest them if needs be.

15 We'll work with customs and border
16 protection to do that sometimes also. And that's
17 just to make sure that somebody isn't coming that
18 we don't know about.

19 And they also have to give us
20 information on their international ship security
21 certificate. Basically, if they're in compliance
22 with ISPS that's what they get, and they have to
23 validate for us that they're actually in
24 compliance and then give us the data on that
25 certificate, which is issued to them by their flag

1 state, so we know that they're in compliance.

2 And the other thing is that they have to
3 validate that they actually have a security plan
4 on board the vessel and that it has been
5 implemented, a vessel security plan.

6 I want to talk to you a little bit about
7 these vessel security plans, because they are an
8 important part of this. Basically it's got to
9 address several issues.

10 The first one is how do they control
11 access to the vessel, whether they're in anchor or
12 in port they have to have a method of controlling
13 so that nobody can get on board, or monitoring
14 who's getting on board. And usually that entails
15 a gangway watch, that's generally what's required.

16 And they'd also have to explain how
17 they're going to control access to restricted
18 areas. You know, maybe the bridge or the engine
19 room or where the power is generated for the
20 lights and the navigation systems. You want to
21 make sure that they have control of that.

22 Also how are they going to handle
23 security while they're transferring cargo. You
24 don't want anybody coming on board and disrupting
25 it.

1 They also have to have processes for
2 when they're going to receive stores and bunkers.
3 If you've got a small boat coming alongside what's
4 their procedure for that. How do they know that
5 that's the right small boat.

6 Or if there's a barge coming on board
7 how do they know what it's business is, or coming
8 up alongside to give them bunkers for example,
9 that all has to be spelled out in the plan.

10 They also, in addition to access
11 control, they have to have procedures for
12 monitoring the vessel. You can have access
13 control, you can do all these security procedures,
14 but it is possible somebody could get on board the
15 vessel. How do you monitor the vessel to
16 determine if anybody is on board. That has to be
17 in the plan as well.

18 And then they have to have a section
19 that explains how they're going to respond if
20 there's an incident. What are they going to do,
21 they have all these security procedures in place
22 but then something goes wrong and something
23 happens, what's their response.

24 How are they going to control access to
25 the area where the incident occurred. So you have

1 something happen out on deck, how are you going to
2 control access to that area while still allowing
3 access to the rest of the vessel.

4 What are they going to do to deny access
5 to the vessel during an incident? So an incident
6 takes place, you've already got your gangway watch
7 there, but what measures are they going to do to
8 increase the prevention, you know, the odds of
9 anybody else coming on board in the confusion.

10 How are they going to implement
11 increased levels of the maritime security levels
12 that we have in the country? If there's an
13 incident on board a vessel they have to be able to
14 also explain, during that incident we're probably
15 going to up the level, maybe for the vessel they
16 have to explain how they're going to increase that
17 level.

18 And then they also have to explain,
19 during an incident, how are the going to maintain
20 critical vessel operation. Yo know, you're at an
21 anchor, you still want to have the engines ready
22 to go, you still want to have power generation for
23 the Nav equipment and stuff like that. So they
24 have to explain how they're going to make sure
25 that those things are all intact.

1 Let me see, what else. The plan also
2 has to address training of personnel. It has to
3 list who's going to do what on the vessel and then
4 what training is required of those people so that
5 they can do that job. And it's focussed training
6 on what their mission is for each individual crew
7 member.

8 They're required to conduct drills and
9 exercises, so the plan has to lay out how they're
10 going to do that. They have to do drills every
11 three months, or every time 25 percent of that
12 crew changes out and they get new people on board
13 that are not familiar with the vessel.

14 And those drills really are focused on
15 implementing a portion of the security plan. They
16 can take a section of it, just like we do. On
17 abandon ship drills for example, you're not
18 testing everything on board the vessel, you're
19 just testing lowering the lifeboat and getting
20 people off.

21 Well, the same thing with the security
22 plan. They can do a drill that's focused on
23 access control, or any particular facet of it that
24 they want.

25 But in addition to the drills they have

1 to do an annual exercise, which is basically a
2 full scale event, a full scale test of the plan.
3 And it has to involve everybody. ?And they have
4 to do those once a year.

5 In general, all of their procedures have
6 to be scalable is the world we're using. In other
7 words, depending on the nature of the security
8 threat, they have to be able to beef it up, and
9 then it has to be built into the plan.

10 If you're at marisec level one here's
11 what it is, and at level two here's how we're
12 going to do it, and at level three here's how
13 we're going to do it. So each thing is scalable.

14 Some other stuff they have on board is a
15 ship security alert system. And this is, it's
16 kind of a silent alarm basically that the master
17 knows about. And if something happens while
18 they're underway or in port you can just activate
19 this alarm, and what that does is it alerts the
20 Coast Guard.

21 And the actual, all those alarms come in
22 to our Pacific area command center, which is in
23 Alameda, California -- for the whole country they
24 come in there, not just for the state of
25 California.

1 And what will happen is the master will
2 activate the alarm, it would sound off an alarm
3 there, and then we would take that for action, and
4 determine whether it's a false alarm, whether it's
5 a real alarm. There are procedures in place,
6 which I don't want to get in to, in order to
7 validate what that alar is.

8 The other thing we have on these vessels
9 is our automatic identification system. It really
10 started out as a safety system, but it's kind of
11 turned into a security system too.

12 It's basically a transponder on board
13 the vessel that allows us and other people that
14 have it on board to see the locations of these
15 vessels where they're at. It gives us the
16 opportunity to have a better maritime to main
17 awareness, we know who's out there, where they're
18 at, and what they're doing.

19 So if somebody gives us an advance
20 notice of arrival, saying he's going to do one
21 thing, and then we see from the AIS that he's
22 doing something different, theoretically it'll
23 clue us in that maybe something's wrong or there's
24 some confusion going on, or some incidents they
25 can place. So it's turned into a good security

1 procedure also.

2 Beyond that now, in general, the Coast
3 Guard also has boarding teams in place. So
4 depending on what we learn from the advance notice
5 of arrival and what we've learned from studying
6 the vessel and their history and the crew members
7 on board, we may decide to board the vessel.

8 And if we board it, there's two types of
9 boardings, in general, that we do. There's a port
10 security boarding, and that's basically we send
11 armed teams out, and they'll go on board the
12 vessel, and they will validate what was reported
13 to us in the advanced notice of arrival.

14 They'll go through the passports,
15 they'll look at the crew list, they'll do a
16 security sweep of the vessel to make sure there's
17 nobody stowed away on it, there's no contraband on
18 board, or no threat at all entailed with the
19 vessel.

20 They'll also make sure that the security
21 plan has been implemented on the vessel. And the
22 whole point of the boarding is to make sure the
23 vessel is secure so it can come into port without
24 a problem.

25 The next level up, the second level of

1 boarding that we do, is a positive controlled
2 boarding. This starts out with a security
3 boarding, our team will go on board, but after
4 they've completed a security boarding they'll then
5 place armed Coast Guard personnel at various
6 locations on the vessel to secure those
7 locations -- the brig, engine room, places like
8 that.

9 And the whole point is to make sure that
10 nobody can take over the vessel while it's
11 transiting in. And that's, you know, you might do
12 that with a higher risk vessel, you could possibly
13 do that with na LNG vessel, a tanker, depending on
14 what you learn overall, the big picture of what
15 the threat levels are and what needs to be done.
16 But that's the second level of boarding we do.

17 In addition to that, the Coast Guard
18 does escorts of these vessels. And we've always
19 kind of done escorts in the past for safety
20 reasons. We'll put a patrol boat out there to
21 bring in some vessel just to make sure everybody
22 stays clear of it.

23 Well now we're doing security escorts,
24 and these are with vessels that are armed with
25 crew served weapons, that can basically handle any

1 kind of a threat that might come up and be posed
2 to the vessel.

3 And they'll follow the vessel in and
4 lead it in the entire way until it gets to the
5 dock. Just to prevent any interference with its
6 transit.

7 In addition, another measure we have are
8 basically safety and security zones. They're
9 basically the same thing. The whole design in
10 them is to keep people away from the vessel. Any
11 time we do an escort we're going to have a
12 security zone in place, that gives us the legal
13 authority to keep people away.

14 And that's what -- the difference
15 between a safety and a security zone is kind of
16 academic in a sense. A safety zone is designed to
17 protect what is outside of that zone from what is
18 in it.

19 If you have a dangerous vessel coming in
20 or recreational boaters, let's say, you put a
21 safety zone up to keep the recreational boaters
22 away because you have a deep draft vessel that
23 can't move, or --.

24 But a security zone is designed to
25 protect what is within the security zone, say an

1 LNG vessel or a tanker or what have you, or
2 military, say a naval vessel coming in.

3 And that's to prevent anybody from
4 getting access to it and damaging it and injuring
5 it in any way or disrupting its operation.

6 And there are some legal enforcement
7 authorities that we have, you know, criminal,
8 stuff like that, for the different zones, that
9 would go into effect too. But overall the intent
10 is to keep everybody away from the vessels.

11 A couple of things I just wanted to
12 mention here, that's great when you're in our
13 port, you know, we've pretty much got a handle on
14 that I think.

15 But what we've found is that there are
16 countries out there that don't have adequate anti-
17 terrorism measures in place. And just in May the
18 Coast Guard came out with some new procedures for
19 vessels that have visited ports that do not have
20 good anti-terrorism measures in place.

21 And they've actually identified five
22 ports, three of them I can pronounce -- Liberia,
23 Mauritania and the Democratic Republic of the
24 Congo. And there's a couple other ones, I'll
25 leave the names unmentioned, only because I'm not

1 sure how to say them.

2 We've determined they don't have the
3 proper anti-terrorism measures in effect, so what
4 do you do when you have a vessel that's visiting
5 those ports. So what we've said is, if you've
6 been to a port in those countries within your last
7 five port calls you have to let us know that you
8 did certain things while you were there before
9 we're going to let you into our ports.

10 And those things include, you have to
11 implement security measures in your plan up to the
12 second security level. In other words, not just
13 what you would have to do in our country, but what
14 you'd have to do if we were in a heightened state
15 of security. They have to implement the second
16 level of security while they're in that country,
17 and they have to document it in the ship's log.

18 And while they're there they have to
19 ensure that each access point, every access point
20 to the vessel is guarded and that the guards have
21 total visibility to the exterior of the vessel.

22 So it's not just making sure that nobody
23 comes up the gangway, it's making sure nobody come
24 around the vessel and you can see the entire
25 vessel and the surrounding area, just to prevent

1 anybody from coming on board and either smuggling
2 a terrorist in or putting some kind of a weapon or
3 something on that shouldn't be on there.

4 And then they also have to attempt to
5 execute a declaration of security. And a
6 declaration of security is what a vessel and a
7 facility sign when the vessel comes in, basically
8 agreeing how they're going to secure the vessel
9 and the facility while they're there.

10 And if this country doesn't have proper
11 anti-terrorism measures in place it's likely
12 they're not going to be able to get a declaration
13 of security, but they have to try to get one. And
14 they have to log all of this in the ship's log.

15 So once they do that, and they're going
16 to come to a US port, then they have to notify us
17 and the captain of the port that they did these
18 things, and we'll go out and verify that they
19 actually did these things, by showing that they
20 did it in the log and talking to the crew.

21 But in addition, when we decide to let
22 them in the port, while they're in our port they
23 have to have armed guards in place that can also
24 monitor this coming and going from the vessel.
25 These are private security guards they are

1 required to hire that are armed.

2 We don't normally require that, but just
3 in case something goes wrong and somebody does get
4 on or something happens, there's some armed
5 control and security to protect the US facility in
6 a US port.

7 So that's kind of what we're doing in
8 those kind of situations. In addition, one of the
9 things that we do, we do exercises with the Navy.
10 And I'm not sure if any of you have ever heard of
11 them, we just did one down in the Port of Los
12 Angeles and Long Beach called lead shield rogue X.

13 The lead shield portion isn't
14 necessarily applicable to here, it was like a
15 harbor mining exercise and how do you clear the
16 harbor of mines.

17 But the second part of it dealt with
18 what do you do when you have a rogue vessel kind
19 of come into port, and they're just, you know,
20 trying to come in without authorization, they
21 haven't given you notice, and you don't know what
22 you've got out there.

23 And we drill for that and we exercise
24 that. That's the second or third one we've done
25 actually in the ports in California in the last

1 couple of years.

2 And we have boarding teams that are
3 trained specifically for that mission. They can
4 go onboard, take control of the vessel, and
5 prevent it from coming in if need be.

6 All of this fits into the big picture of
7 what the Coast Guard does, and that's what I want
8 to talk about real briefly in conclusion here.

9 Overall, the Coast Guard has been re-
10 capitalizing its fleet, under the Deep Water
11 Project. Most of our stuff is pretty old, our
12 cutters and stuff, so we're buying new cutters
13 slowly over a period of years to be phased in.
14 It's a big budget item and its slowly taking
15 place.

16 And in addition to that, the big cutters
17 -- you see all of the small boats that we have in
18 the harbor that we're using to provide the escorts
19 if you've ever been in to the port you'll see
20 rigid hulled boats with a deck house on them that
21 can be armed with machine guns and stuff like that
22 -- we're doing a lot of money, capital investment.

23 We've also stood up brand new units that
24 we've never had called marine safety and security
25 teams. Basically these are, their sole purpose in

1 life is to provide security within the port if
2 needed. And they train every day for that mission
3 and that mission alone.

4 We use them during our exercises, the lead
5 shield rogue X, they're key factors in that one.
6 And they'll do escorts for us on occasion,
7 depending on what needs to be done, they're a key
8 asset for shutting down the port.

9 They have specialized weapons and they
10 go through all kinds of special training and
11 tactics in order to do that.

12 And the last point I wanted to touch on
13 briefly is our security committees. Before 9/11
14 we had area committees that would deal with oil
15 pollution and things like that, harbor safety
16 committees.

17 Well, we now have area maritime security
18 committees, and these are comprised of federal
19 officials, state officials, local officials, as
20 well as industry partners.

21 And basically their task is securing the
22 port, you know, coming up with a plan, figuring
23 out how to do it. It's chaired by the captain of
24 the port, who is a Coast Guard officer. And they
25 work together, they've been doing it for the last

1 couple of years.

2 And when we do our exercises, like the
3 rogue X lead shield, it's done through the
4 committee so the committee is stood up in a
5 unified command, and that's how we address it.

6 Also, all of the players are at the
7 table there, not just the military, not just the
8 government -- state, local, federal -- but also
9 industry too, so we get expertise from everybody
10 involved. And they work pretty well actually.

11 And on top of that, the Coast Guard has,
12 not the Coast Guard by the federal government has
13 started up a national maritime security committee.
14 It's still pretty new, they've met a few times so
15 far, and haven't seen things come out of that just
16 yet but it's there.

17 And that's about all I had that I wanted
18 to cover for you, to give you an idea of.

19 MR. MAUL: That was very thorough, thank
20 you very much. Questions? Commissioner Boyd?

21 COMMISSIONER BOYD: Yes, thank you,
22 Commander. That was very enlightening. And you
23 really did address some of the questions I had
24 come pre-prepared to ask, particularly your
25 reference to the rogue vessel situation.

1 But I'm, just because this is so
2 prevalent in California a concern, as California
3 looks at potentially three proposed offshore an
4 done proposed onshore LNG facility, particularly
5 the offshore facilities, one of the scenarios that
6 we hear about as people express concerns, and
7 these are all well meaning people, some people are
8 just expressing fears post-9/11, there's a of of
9 that in this country, and some people perhaps are
10 misusing these fears because they don't want one
11 of these in their back yard, so to speak.

12 But it has to do with the capture of a
13 vessel and bringing it into a port, or -- and I
14 don't know if this is physically possible, but
15 being a boater myself, not ships -- but running a
16 vessel that was in one of our offshore deep water
17 facilities onshore, sabotaging the vessel.

18 Now your discussion of the rogue vessel
19 situation kind of addresses that with regard to
20 your ability to board a ship. And the one thing I
21 did want to ask -- and you might want to re-
22 address that, because in the world in which we
23 operate perception is reality in many people's
24 minds.

25 So, do you have the capability of

1 disabling a ship underway, short of or in addition
2 to boarding it? I mean, they re vessels with
3 hazardous cargo, so you're not exactly going to be
4 attacking it with armaments and what-have-you, but
5 maybe there are other ways -- and maybe you don't
6 want to discuss this -- but ways of disabling a
7 ship, preventing it from being able to proceed
8 underway and what-have-you.

9 And any other things that you might want
10 to comment on that would destroy some of the
11 perceptions and just assuage the concerns of some
12 of the citizens of the state?

13 MR. DRELLING: Well, I guess what I
14 would say is there are emergent technologies for
15 stopping vessels. And I really don't want to get
16 in to what they are, but there are some out there,
17 and the Coast Guard Research and Development
18 Center and others are working on that very issue.

19 I think it's a real issue, and it's a
20 fair question. You know, for detaining a vessel,
21 what we might do for, say, a counter narcotics
22 operation we're allowed to shoot the vessel as its
23 sailing.

24 But you're right, if you've got an LNG
25 vessel or a tanker or a passenger vessel you're

1 probably not going to want to do that, and are you
2 going to have weapons that are going to penetrate
3 the hull so that you can take out the engines.
4 Those are all issues, exactly.

5 One thing I would say about attacking a
6 vessel, you want to be careful about that one
7 because the goal is really, ideally, if you could
8 do it, you would want to keep the vessel intact,
9 as well as the people on board, so that you can
10 get at the intelligence involved, in order to find
11 out where they came from and how they did it.

12 So, I really don't have a whole lot to
13 say in that area, but in general that would be one
14 of the goals. The primary goal would be to stop
15 the vessel from coming in, however you had to do
16 it.

17 You could even take a vessel and block
18 the entrance to the harbor if you had to. I mean,
19 there's different non-intelligence related and
20 non-, you know, classified techniques that you can
21 use, like that.

22 But I would just say in general, yes,
23 it's an issue, the technology is being developed,
24 and it's not an easy nut to crack though.

25 MR. MAUL: Harvey?

1 MR. MORRIS: Yes, as the market is
2 developing, besides a steady supply of LNG that
3 maybe would be supplied from a certain country,
4 they're talking now about the stock market, where
5 some shipments might have been going to one
6 country, some to somewhere else in the world,
7 diverted, to fill a need in the United States.

8 Will that still give you sufficient time
9 to check on ships, have you looked into those
10 issues?

11 MR. DRELLING: Yes, that's not a problem
12 at all for us. Because they have to tell us their
13 last ports of call, wherever they came from, I
14 mean, once they pick up a load and then it changes
15 on the spot market and it goes somewhere else,
16 they'll still have to tell us where they got it
17 from, even if they're halfway to the US.

18 We have had instances where vessels, at
19 the last minute, have tried to come in. We put
20 them out, we don't let them in, we make them wait
21 the full 96 hours until we complete the vetting
22 process.

23 So even if, the day before they were
24 going to Mexico and then they changed the last
25 minute with a day's notice to here, we wouldn't

1 let them in. We'd hold them out for the full 96
2 hours and go through the entire process to make
3 sure everything was in order first. And we have
4 done that.

5 MR. MAUL: Bill, you have talked about
6 stowaways and the process you got through to board
7 vessels and search them. On the other hand, we've
8 read books, like Richard Clarke's, talking about
9 stowaways on tanker-type vessels.

10 Can you prevent the kind of thing that
11 Richard Clarke alleged happened in the Boston and
12 the Evert (sp) facility?

13 MR. DRELLING: I don't know what he's
14 alleged, I'm not familiar with his book at all.

15 MR. MAUL: Well, he's alleged that there
16 were stowaways on an LNG tanker that was brought
17 into the Boston terminal.

18 MR. DRELLING: Well, I think there's no
19 doubt that stowaways can get in. I mean, I think
20 it does happen, it's a possibility no matter what
21 your security procedures are.

22 Alls you can do is put the procedures in
23 place to identify it. And one of the things I
24 believe is that one of our strengths is that we
25 talk about things freely and publicly, and the

1 public tends to be aware of it.

2 And the people in the yard and in the
3 facility are aware of it. There's a layer of
4 defense there, right. You've got the guys in the
5 foreign port trying to prevent it from happening
6 in the first place, but then you've got the guys
7 on the vessel trying to secure the vessel so it
8 doesn't happen.

9 And then you've got our boardings and
10 our searches when the vessels come in. And then
11 you have the facility, because once they get off
12 on it they've got to get out of the facility
13 somehow. So you get these strange guys wandering
14 around the facility.

15 There's a lot of layers there to prevent
16 it from happening, and I think it's pretty
17 effective. But could it happen, I guess, I
18 suppose that it could. But all you can do is
19 build in the layers and try to prevent it from
20 happening, and that's what we do. And it seems to
21 be pretty effective.

22 MR. MAUL: Good. Bill, thank you very
23 much for your insights here. We're looking
24 forward to working with the Coast Guard on these
25 issues.

1 COMMISSIONER BOYD: Dave, before you
2 release the panel I'd like to go back to Roger if
3 I might, I thought of something afterwards. He
4 did a very thorough job of dealing with ships and
5 dockside operations and many of the incidents that
6 have occurred, except for Cleveland, which was not
7 exactly dockside.

8 One of the things we hear a lot about
9 lately is the fairly recent incident that
10 occurred, I believe it was Algeria again. But it
11 was at a liquefaction plant, not a loading and
12 what-have-you.

13 But since you are a fairly worldly
14 gentleman and very knowledgeable on this, I wonder
15 if you could give us any insight that you may have
16 gathered to date on that particular incident?

17 MR. ROUE: Yeah, the liquefaction plant
18 basically consists of a large, it's a large
19 refrigeration plant which consists of a
20 compressor, a condenser, a cold box, and then
21 back.

22 It's a closed circuit, and the
23 refrigerant that's used generally consists of
24 methane, propane, ethane, nitrogen -- various
25 mixes depending on the cycle and the design and

1 manufacturer that is used.

2 These are fairly big compressors, and
3 the one in Skikda, where there was an explosion,
4 was actually driven by a steam turbine. So you
5 had a boiler turbine driving the compressor.

6 And what, it would appear, happened, was
7 that there was a leak on the system. Now whether
8 it was on the LNG circuit, which is from the
9 natural gas coming in to the LNG coming out
10 through the cold box, or whether it was
11 refrigerant, we don't know, and we're highly
12 unlikely to find out.

13 But there was a hydrocarbon leak, okay.
14 I suspect personally it was probably the
15 refrigerant, because that would be LPG propane,
16 ethane, heavier than air, okay.

17 That leak was picked up by the forced
18 draft fan that provides combustion air to the
19 boiler that's producing the steam to drive the
20 steam turbine.

21 The gas got into the boiler and we know
22 that the plant operator was having trouble
23 controlling the steam pressure on the boiler. The
24 boiler pressure was going up and up and up. He
25 was winding down on the combustion control system,

1 which should have dropped the pressure but it
2 wouldn't.

3 So you had a runaway reaction. The
4 boiler was drawing in, with the air it was drawing
5 in gas, okay. That in turn was heating the boiler
6 and causing the pressure to rise. Eventually
7 there was an explosion in the boiler furnace which
8 ripped the boiler apart and obviously it exposed
9 very hot metal and refractory brick work.

10 There was then a secondary explosion
11 which caused a vapor cloud explosion, it would
12 have been a congested area, you get a gas and air
13 mix, there's a vapor cloud explosion which
14 destroyed the train and the adjacent trains.

15 Now, there should have been gas
16 detection systems around that plant, and
17 particularly you'd expect them to be in the air
18 intake to the boiler. Now that should have shut
19 everything down, but it didn't happen, and we can
20 only surmise that the gas detection system was not
21 operating or was not operating correctly.

22 COMMISSIONER BOYD: And as yo said, it
23 was Algeria. Thank you very much.

24 MR. MAUL: All right, gentlemen, thank
25 you very much for your presentations today,

1 they've been very helpful.

2 Before we call up our next panel here, I
3 just want to check, is Honorable John Olsen with
4 us in the audience now?

5 Sir, I know you're on a very tight
6 schedule, would you like to make your presentation
7 to us now or at your scheduled time? Come now,
8 okay.

9 Then let's take the Honorable John
10 Olsen, the the Consulate General from the
11 Australian Consulate in Los Angeles. We'll take
12 him right now and do a quick shift change her eon
13 our microphones.

14 And also, during our quick change here,
15 I'd like to note that Chairman Joe Desmond has
16 rejoined us, and I'd also like to welcome Keith
17 Lesnick from the US Maritime Administration.
18 Keith, welcome to our table here. Hopefully we'll
19 catch up on what we missed yesterday.

20 All right, I'd like to introduce the
21 Honorable John Olsen, who is the Consul General
22 for the Australian Embassy in Los Angeles. Sir,
23 welcome to Sacramento.

24 MR. OLSEN: Thank you, David. Chairman
25 Desmond and members of the panel, firstly might I,

1 on behalf of the government of Australia thank you
2 for the opportunity of being able to join you and
3 present briefly at this morning's session.

4 Australia is the 8th largest foreign
5 investor in the United States and in the state of
6 California. One the first of January this year
7 Australia and the United States entered into a
8 free trade agreement.

9 California plays an important role in
10 the US-Australian relationship, as the port of
11 entry for much of the import and export traffic.
12 California's Business, Transportation and Housing
13 Agency reports that in 1999 there was some \$3.7
14 billion investment in California.

15 California is the 2nd largest exporting
16 US state to Australia. Australia takes seriously
17 and are committed to growing our economic and
18 cultural ties with the US post the free trade
19 agreement.

20 My purpose here today is to discuss what
21 could lead to a sizable amount of free trade with
22 California in the delivery of natural gas from
23 terminals out of Australia into terminals within
24 the state.

25 Australia produces a significant part of

1 the world's natural gas. A conservative estimate
2 of the northwest shelf in Australia, reserves are
3 143 trillion cubic feet of gas. We are currently
4 providing natural gas to countries around the
5 Pacific Rim, including Japan, China -- where some
6 18 months to two years ago we signed a 25 billion
7 dollars US contract for the supply of gas to China
8 -- and Korea.

9 We have built a reputation as a reliable
10 supplier with an impeccable, that is without
11 incident, safety record for over two decades. I
12 have a 1,600, getting towards 1,700 shipments have
13 left Australia to the port of destination without
14 incident.

15 Our record of reliability, safety, and
16 pricing structure recently resulted in the \$25
17 billion US contract with China that I referred to.

18 The current estimated gas fields of
19 Western Australia are capable of providing stable
20 deliveries of natural gas to the US market for the
21 next 40 years. And what are some of the factors
22 that would allow me to say that.

23 Australia is a stable western democracy.
24 The Resources Center has been fundamental to the
25 economic development of Australia. Australia has

1 been a reliable supplier of energy resources for
2 decades.

3 Australia has built key linkages to
4 Asian economies through their reliance on natural
5 resources, and those type of linkages can work for
6 the US and California.

7 With the advent of the free trade
8 agreement between the United States and Australia
9 on the first of January it provides a framework
10 for greater trade, liberalization and advancement
11 between our two countries.

12 In fact, as of the first of January this
13 year 99 percent of US manufactured goods access
14 the Australian market without one cent of duty.
15 We have, between our two countries, complementary
16 legislation as it relates to anti-competitive
17 laws, labor laws, and environmental laws.

18 The strong tradition and respect for the
19 rule of law in Australia, we believe, our respect
20 for commercial relationships, have contributed to
21 the tremendous growth in our economy.

22 Other exporting governments may have had
23 a direct hand in contracts, but that is not the
24 case as it relates to Australia and guest
25 contracts in particular.

1 Australia is a stable investment
2 environment, and while our country has major
3 Australian based companies, such as BHP Billiton,
4 the world's largest resource company, Woodside
5 Energy, involved in the gas fields, other global
6 companies, including Chevron, BP, and Mitsubishi,
7 all have investments in the development of the gas
8 fields.

9 Australia has a regulatory
10 infrastructure in place to drill for the gas in an
11 environmentally appropriate manner. We have a
12 free competitive market in gas supply. There are
13 a number of fields. The northwest shelf, Morgan,
14 Browse, Scarborough, to name but a few.

15 Australia is one of the very few, if
16 only, western developed nation and ally as a
17 supplier of LNG, to the United States. That could
18 be categorized as an ally, and the only one who
19 has, last century and this century, joined with
20 the United States in every conflict
21 internationally.

22 And I simply say that if you're going to
23 source a product why wouldn't you source a product
24 from a country that has worked closely with you
25 for a century plus.

1 The US has a substantial surplus in
2 trade with Australia, some \$10 billion. And while
3 there are not many countries that I know the US
4 has a trade surplus with, the US does with
5 Australia, as does California with Australia.

6 Australia has a deregulated market,
7 we've reduced our tariff barriers, we've opened up
8 our borders for competitive economic base, to the
9 extent that we've had 15 years of consecutive
10 economic growth within Australia.

11 Companies like General Motors and Ford
12 are producing product out of Australia, accessing
13 the Middle Eastern countries. The Chevrolet for
14 example that goes into the Middle East is
15 designed, manufactured and engineered out of
16 Australia. Ford, likewise, has major
17 manufacturing plants within Australia.

18 We have a highly educated workforce and
19 a highly skilled workforce, all contributing to
20 our impeccable safety record in supply of LNG
21 internationally.

22 We of course as a country would be able
23 to supply California's needs into the future,
24 subject to receiving terminals being in place.
25 Australia is already delivering natural gas all

1 around the Pacific Rim, and the market is expected
2 to grow to some 120 million tons by the year 2010.

3 We hope that California will take
4 advantage of the growth in that market, in the
5 energy needs for itself and its citizens. And
6 that you would see us in Australia as being able
7 to supply reliably that gas for your future needs
8 at a competitive price, a reliable supply, a
9 guarantee without incident, as our track record
10 would indicate.

11 And it would go some small measure
12 towards the balance of payments that are tipped
13 subtly in favor with the United States of America.
14 Thank you for the opportunity to make those few
15 comments today.

16 MR. MAUL: Good. Thank you very much.
17 Chairman Desmond, any questions?

18 MS. SCHWEBS: Yesterday the subject of
19 East Timor came up and the new agreement which
20 would affect the Browse basin. Could you tell us
21 a little bit about that agreement?

22 MR. OLSEN: The agreement, in relation
23 to East Timor, is still subject to some government
24 negotiations. And they have not been finalized,
25 or at least to my knowledge have not been

1 finalized at this stage.

2 The gas fields that I've principally
3 referred to, on the northwest shore, are separate
4 from the East Timor fields that we've referred to
5 that are subject to the negotiations between East
6 Timor and the Australian government.

7 MS. SCHWEBS: A second question, too.
8 There were press reports that Mr. McFarland was in
9 Mexico not long ago and reached some kind of
10 energy agreement with the government of Mexico.

11 Perhaps not coincidentally, shortly
12 thereafter Shell switched from Sakhalin to
13 Australian reserves. Could you tell us what that
14 agreement was all about, with Mexico?

15 Memorandum of Understanding, I guess I
16 should say, from the press reports?

17 MR. OLSEN: I can make arrangements for
18 a copy of the Memorandum of Understanding, that
19 which has been released to date, be made available
20 to the committee, the detail of which I do not
21 have with me at the moment.

22 MR. MAUL: Good, thank you.

23 COMMISSIONER BOYD: Thank you.

24 MR. MAUL: All right, let's continue on
25 then. Our next panel then, we have three speakers

1 here, we Andy Weissman from the Energy Ventures
2 Group; Bill Powers from the Border Power Plant
3 Working Group; and Lawrence Smith, a partner with
4 Bennett Jones out of Calgary, Alberta.

5 If we can have all three of you come up?

6 Good morning, gentlemen, we appreciate you're
7 coming up here today, and actually flying, all
8 three of you actually flying a long ways to come
9 see up today, and we appreciate your attendance
10 and the time that you're going to take with us and
11 provide some insight on these issues.

12 So let's start with you, Andy. Andy
13 Weissman, you're the owner and founder of Energy
14 Ventures Group out of Massachusetts I believe is
15 that correct?

16 MR. WEISSMAN: Washington D.C.

17 MR. MAUL: Washington D.C., okay, good.

18 MR. WEISSMAN: Although I've caused a
19 lot of trouble in Massachusetts over the years,
20 but, based in Washington D.C.

21 MR. MAUL: Well, we've read a lot of
22 your materials before, so we know that you've had
23 a lot of thoughts on these issues, and we
24 appreciate your sharing your thoughts today.

25 MR. WEISSMAN: Well, I want to express

1 my appreciation to Chairman Desmond and all of the
2 rest of you for inviting me to be here today.
3 It's really, and especially, finally two days to
4 be focusing on issues pertaining to LNG because
5 during the course of the time that we've been
6 meeting the price of natural gas has gone up 60
7 cents, and the 12 month script, at least as of
8 about 60 seconds ago, was selling for \$7.55 a
9 million BTU with the July contract, the least
10 expensive of the contracts right at \$7.

11 So we're continuing to see some fairly
12 steep increases in natural gas prices, and what
13 I'll try to focus on is the circumstances in which
14 LNG can potentially help alleviate that problem
15 and circumstances in which it potentially might
16 exacerbate the problem and the conditions that
17 hopefully could slant the circumstances in a
18 positive way.

19 I want to start by taking two slides,
20 out of sequence and I apologize for that, but
21 there are two points that, in some respects
22 perhaps are the two most important takeaways in
23 the presentation.

24 I'm not going to try to go through the
25 whole slide path, I'm really going to focus only

1 on the first nine slides, but I'm going to take
2 these two out of sequence, because they're really,
3 in my judgment, the two factors that will most
4 determine what energy prices in California are
5 going to be over the course of much of the rest of
6 our lifetimes really.

7 This first slide is from the study that
8 the National Petroleum Council issued about a year
9 and a half ago now, on the natural gas supply and
10 demand in North America.

11 And the reason I'm putting it up is
12 because what it shows is their estimate of how
13 much of our future gas supply has to come from gas
14 fields in North America that have not even been
15 discovered in order to be able to maintain gas
16 supplies that are sent from North American levels
17 at just current levels.

18 Now, why am I putting that up and how is
19 that relevant to LNG? Well, it's relative in a
20 very significant, very major sort of way.

21 And the way that it's relevant, and the
22 significance to future energy prices in California
23 is basically this, what is happening now -- and
24 this isn't anybody's fault, and I'm not trying to
25 suggest that it is -- but I think it's a problem

1 that's extremely important for all of us to be
2 able to figure out how to solve.

3 The problem that exists at this point,
4 essentially, is that what's actually happened, and
5 you can't find this reported any place, but it's
6 nonetheless one of the most significant things
7 that will affect future energy prices in
8 California -- and again it's nobody's fault, it's
9 just a problem that we have to figure out how to
10 solve.

11 What's actually happening is, to a very
12 large degree, natural gas developers in the United
13 States are not engaging in the exploratory
14 development and the drilling of new fields that's
15 essential, even to hold supplies of natural gas in
16 North America constant over the next several
17 years.

18 And that is of fundamental importance to
19 California. And the reason that they're not is
20 that, from their perspective -- they're not
21 experts, they're much less expert on the natural
22 gas market than you would expect -- from their
23 perspective they expect that the market may well
24 be flooded with LNG.

25 And they don't want to take the risk of

1 making large investments in the kind of
2 development that won't pay off until several years
3 down the road, because they take it as quite
4 plausible that by three or four years from now
5 we'll have massive amounts of LNG at \$4 or \$4.50
6 per million BTU.

7 And maybe that's right. And if it is,
8 and if your break-even costs for new oil is \$5 or
9 \$5.50 or \$6 is doesn't make sense to undertake the
10 development.

11 But the potential problem for
12 California, as well as the whole rest of the
13 country, is that what's really happening now,
14 what's really going on -- Bob Howard yesterday
15 asked why it is that natural gas prices keep going
16 up -- well, what we're seeing in a sense is just
17 the tip of the iceberg.

18 Because what's really happening in the
19 field for the last several years is that
20 developers are concentrating mainly on increasing
21 the density of drilling in existing fields.

22 Essentially they're going to the areas
23 where they can get quick returns. And by
24 increasing the rate of extraction in existing
25 fields they've just barely been able to hold

1 supply stable.

2 Now there's nothing wrong with doing
3 that, but the effect of doing that is that it
4 brings closer the date when those fields will go
5 into very rapid decline.

6 And so what's really set up, that's
7 critical for all three of the Commissions that are
8 sponsoring this workshop to understand, what's
9 being set up is a situation with the likely
10 scenario of unless we have much more of an
11 integrated planning process in the United States,
12 development of a national energy plan, development
13 of a plan for California, is a scenario where, in
14 the near future, we may see, just two or three
15 years from now, a scenario in which North America
16 supplies begin to decline very rapidly, because
17 essentially what we've been doing is extracting
18 very rapidly the available natural gas in existing
19 fields and not doing much to find and develop
20 those new fields that the National Petroleum
21 Council and the EIA have told us are essential in
22 order to maintain supply.

23 Again, the reason why that's happening
24 is because the developers take really accepted
25 value, EIA's projections. And what EIA's

1 projections show is really startling.

2 Because essentially what's happening
3 with very little analysis or debate, over the
4 course of the last 36 months --. 36 months ago
5 EIA expected that imports of LNG, to quote EIA,
6 "would not play a significant role in meeting
7 future US energy supply."

8 Now, it's just the opposite. Now EIA's
9 projections assume essentially that virtually all
10 of our incremental gas supply, over time -- this
11 comes from Annual Energy Outlook 2005, this is
12 actually a slide from one of Guy Caruso's
13 presentations -- that virtually all, 87 percent,
14 of our incremental natural gas supply will come
15 from two sources.

16 Either increased imports of LNG or the
17 gas that will come in from the Alaskan Pipeline.
18 And that gas is probably at least a decade away.

19 Now maybe that gas supply is available,
20 certainly, hopefully, a significant portion of it
21 is. But the problem is, in terms of exposure to
22 future price increases in California, that right
23 now our ability to maintain prices even at
24 anywhere near current levels, is more or less
25 totally dependent on these estimates being

1 correct.

2 There eis no backup source of supply
3 right now, because the market is essentially
4 assuming these estimates are correct. And these
5 estimates, the weakness in the system, the reason
6 in effect why prices have been increasing so
7 rapidly in recent years, is that the weakness in
8 the system is that we spend almost no resource to
9 estimate the adequacy of natural gas supply in the
10 United States.

11 There are literally only about four
12 people involved. And these estimates, they're
13 good people, they work hard, we're actually
14 getting more than our money's worth of what we're
15 spending in terms of the productivity of those
16 four individuals.

17 But those four people who developed
18 those estimates of LNG imports don't know as much
19 as the expert that the two Commissions sponsoring
20 this program to invite, Jim Jensen. Jim is really
21 in possession to develop a better set of
22 estimates.

23 And so the question I have for Jim is,
24 and I know you have him on the program again later
25 today, is essentially would you be 100 percent

1 confident, Jim, that we can achieve each year,
2 especially over the next several years, the level
3 of imports that EIA assumes.

4 And would you be 100 percent confident
5 we can achieve them at the price levels EIA
6 assumes, and especially would you be confident
7 that we could -- this last is my take -- but would
8 you be confident that we could achieve them even
9 in a world in which we may well have \$120 or \$150
10 a barrel oil, which personally, for reasons I
11 won't go into today, I think that's a world we may
12 well live in.

13 And I certainly think from the
14 standpoint of the regulatory commissions that we
15 ought to at least be looking at scenarios in which
16 oil prices explode and asking what's likely to
17 happen to LNG prices, and what the implications
18 would be of a strategy of relying on LNG if in
19 fact oil prices continue to escalate as sharply as
20 they have been.

21 Now, with that general introduction, let
22 me take the limited time that's available just to
23 focus on a few of the slides.

24 I think, in terms of the energy price
25 increases that we've seen, unfortunately what's

1 happened thus far is likely tip of the iceberg. I
2 think there's not even really a full appreciation
3 of the magnitude of the cost increases that we're
4 already seeing this year.

5 We may well be seeing total natural gas
6 and electricity in California a good four or five
7 billion dollars cost than we would have expected
8 just two or three years ago.

9 Why did that occur? To a very large
10 degree because of something similar to what's
11 happening now. That is, five years ago we got to
12 a point where we needed more generating resources.

13 And essentially -- and I happen to be a
14 strong believer in market forces generally -- but
15 what we did was we relied on the market to solve
16 that problem. And what the market did is the
17 market went out and built \$100 billion of gas-
18 fired generating plants.

19 And essentially, the short version of
20 why energy costs in California alone are \$4 to \$5
21 billion a year higher this year alone than they
22 would be if we followed alternative strategies is
23 that we didn't do our homework, we didn't have an
24 integrated plan before those decisions were made.

25 We relied on the market. Individual

1 developers went out and built \$100 billion worth
2 of gas-fired plants. It turned out we didn't have
3 sufficient gas supplies in order to be able to
4 adequately fuel those plants and meet the
5 remaining needs of the market simultaneously.

6 And what's happened in between is that
7 natural gas prices essentially have tripled. And
8 frankly what we've seen is just the tip of the
9 iceberg, because power sector demand for natural
10 gas is going to continue to increase every year.

11 The market does work efficiently, it
12 squeezed out a lot of inefficiencies, that's why
13 prices have only tripled in the last three or four
14 years. What's going to happen next, though, is
15 that we'll continue to rely on gas-fired
16 generation for all our incremental needs.

17 We've squeezed almost all the
18 inefficiency out of the system, the power sector
19 demand for natural gas nationally is going to
20 continue growing at 450 to 500 BCF a year. It's
21 not clear that, even with increased imports of
22 LNG, that we'll have any incremental supply.

23 If you think the price increases thus
24 far are painful, just wait to see what's going to
25 happen next. It's going to be extremely painful.

1 So there's a serious problem. I guess,
2 I think what the key is is to understand what is
3 it we're really trying to achieve in looking at
4 LNG as a source of supply in trying to address
5 that problem.

6 And I think fundamentally I would think
7 we'd really want to achieve two things. First of
8 all, we want to augment supply. And secondly, we
9 want to particularly augment supply of a resource
10 that is not tied to the price of oil. Now let me
11 expand briefly on both of those.

12 When I say augment supply, the critical
13 issues, one of the things that is just absolutely
14 essential to learn from the experience in
15 California in 2000, is that energy markets have a
16 more or less unique characteristic.

17 And that is, if you're running short of
18 supply, even for a day, prices go nuts, and you
19 incur potentially literally you can incur \$100
20 million of increased costs in a day. In a month
21 you can incur a billion or two billion dollars in
22 increased costs.

23 So when I say we want increased supply,
24 what we need is supply that we're 100 percent sure
25 is going to be available. LNG potentially can

1 fulfill that role, but I think it can reliably
2 fill that role only if two things are true.

3 One, it's contracted for on a firm,
4 long-term basis. And two, even if it's contracted
5 for on a firm, long-term basis, we probably need
6 to increase our storage facilities to some degree,
7 import some additional amounts of LNG for storage,
8 because from time to time there will be shipment
9 delays or potential problems at the production
10 facilities or other interruptions.

11 And the characteristic of LNG is, that
12 you've heard from other speakers, is that it comes
13 in big blocks. And we'd have to anticipate that.

14 Now, that still leaves a major issue and
15 a major problem. And that is, as you've heard
16 from Jim and a number of other speakers, the trend
17 in the LNG market is that an increasing
18 percentage, still a minority of total sales but an
19 increasing percentage of total sales, are now
20 taking the form of short-term or spot market sales
21 of various duration.

22 And the question, and I don't pretend to
23 be wise enough to know what the right answer is,
24 but I think it's a problem we all need to focus
25 on, the question is what should California's

1 policy be with respect to those shorter term
2 sales.

3 And I think that's potentially a
4 difficult issue, and frankly my instinct, and it's
5 only that because I don't pretend to know what the
6 right answer is, it's too early in the process, is
7 that the best starting point might be to think
8 seriously about not allowing those sales at all.

9 Now that may be too extreme, but here's
10 why I say that. Here's what the problem is.
11 There's no question that if you engage in spot
12 market purchases or short-term purchases you will
13 save money, and potentially significant money, for
14 many, many years.

15 There's at least a very high likelihood
16 that that will occur. But a day will come when
17 the shipments will not arrive. And that day will
18 come simply because there will be times when, if
19 you're relying on short-term deals, where there's
20 a higher price to be had in other markets
21 elsewhere in the world.

22 And in that sense LNG is entirely
23 different from natural gas from a domestic source.
24 Because we buy natural gas in the spot market in
25 the United States. What you know for sure is the

1 wells staying here.

2 And so as long as that well is operating
3 the natural gas is going to be sold into the US
4 market. And that is simply not true for LNG.

5 Now we've spent five years now in
6 California focusing, fighting more than a little
7 bit acrimoniously, about what happens when
8 supplies are deliberately withheld from the energy
9 markets in California.

10 It's happened in the controversy over
11 the El Paso Pipeline, and it's happened in the
12 controversy over alleged price manipulations by
13 some of the generators into the California energy
14 market.

15 And in both circumstances what rides to
16 the controversy is the impact on prices in the
17 energy markets that occur when supplies are
18 withheld.

19 In El Paso it was the allegation that El
20 Paso withheld pipeline transportation rights and
21 therefore blocked natural gas from coming to the
22 energy markets.

23 In the generator cases it's that they
24 deliberately refuse to operate their generating
25 units and therefore blocked power from coming from

1 the generation markets.

2 In the case of LNG I'm not trying to
3 suggest that any LNG supplier would deliberately
4 withhold LNG from the US market for the purpose of
5 manipulating prices in the US market. What I am
6 suggesting, however, is that we have essentially
7 the same problem but potentially on a much larger
8 scale.

9 Because essentially we might have a
10 situation, nationally and in California, where the
11 largest LNG suppliers may well control blocks of
12 supply to the US market that are very large,
13 potentially significantly larger than any block
14 that ever has been controlled by a single
15 supplier, that are literally on boats that can be
16 shipped anywhere in the world.

17 And I'm not suggesting there's anything
18 wrong with that, I'm just suggesting that we have
19 to think through what the market consequences of
20 that are.

21 And the potential market consequences
22 are that what we have to expect is that there will
23 be times where that portion of the LNG supply that
24 is not subject to long-term, firm contracts, will
25 disappear as supply delivered to the US market.

1 There will be times when we will be
2 outbid by other countries. And when that happens,
3 when it disappears, the potential effect on the
4 market price, essentially, could be absolutely
5 identical to what the potential impact was of
6 withholding, of El Paso withholding pipeline
7 capacity or the impact of one or more of the
8 generators along the California coast allegedly
9 withholding their generation from the market.

10 And we have to think through whether we
11 really want to expose ourselves to that.

12 Now, is this a hypothetical
13 circumstance? It's not a hypothetical
14 circumstance. If you look at what's actually
15 happened over the course of the last nine months,
16 it's what's actually happened over the course of
17 the last nine months.

18 Last summer there were a number of
19 cargos that were from sources that ordinarily
20 would have been shipped to US ports that wound up
21 going elsewhere in the world. There was actually
22 one shipment, I understand at least, Jim would
23 know more definitively than I would, but one
24 shipment that, rather than going the short route
25 from Trinidad to Boston, I'm told went most of the

1 way around the world to Japan because there was a
2 higher price available on the Japanese market.

3 And it is certainly the case, you can
4 look at the shipments this March and compare them
5 to December, the shipments went down 28 percent
6 from December to March. And Lake Charles, one of
7 the four terminals, was almost closed down in
8 March of this year, essentially because we were
9 outbid by other markets.

10 Right now LNG is still a relatively
11 small part of our total supply, and therefore
12 there wasn't an obvious, direct, dramatic effect
13 on US prices. Was there an effect? I actually
14 think there was a real major affect.

15 You can't prove this sort of thing
16 because the nature of markets is that you can't
17 necessarily show cause and effect in a definitive
18 sort of way. But I will tell you that I'm
19 reasonably certain myself that there was a period
20 this summer, last summer, where essentially
21 Deutschbank gave a presentation in which, to a
22 number of the hedge funds in New York, in which
23 they emphasized the percentage of LNG deliveries
24 to the US market that were sold on the spot
25 market, and showed how we were being outbid.

1 And they extrapolated forward to the
2 winter time, and they indicated that they expected
3 that unless the price for natural gas in the US in
4 the winter time was bid up to oil equivalency,
5 that we would lose our LNG supply.

6 And they extrapolated from that that the
7 winter month contracts were then under-priced.
8 And I know that at least some hedge fund managers
9 left that meeting and went out and started buying
10 winter month natural gas contracts, and that in
11 the subsequent week the price of natural gas
12 futures, and therefore the cash market price of
13 natural gas in the United States, went up.

14 I could tell you when that happened last
15 summer, because it was very easily discernible
16 what was happening in the market. And that's now,
17 when LNG is a small percentage of the total
18 market.

19 If we're talking about four or five
20 years from now, when potentially we have a BCF a
21 day, or even two BCF a day that's subject to spot
22 market sales, and we have potentially a cold
23 winter, not just here but in Canada and in
24 Northern Europe as well, we have to recognize that
25 that potentially could create a situation where a

1 significant portion of the total supply to the
2 United States market could be at risk almost
3 simultaneously.

4 And we have to recognize that that could
5 have some pretty dramatic price effects. Now,
6 there clearly would be benefits as well from being
7 able to access a spot market. There's no question
8 that that might lower prices in many
9 circumstances.

10 And there's no question, therefore, that
11 if we banned short-term purchases altogether that
12 the result in the short and intermediate term
13 would be that, compared to a world in which we
14 freely allowed short-term purchases of LNG, there
15 would be many circumstances in which the market
16 clearing price of natural gas would be higher.

17 The question is, is that a good thing or
18 a bad thing? Everybody's first instinct might be
19 that it's a bad thing, because we all want lower
20 prices. But some of the consequence of prices
21 being higher are essentially, the price signal is
22 given for developers to go out and do more
23 drilling.

24 The price signal is being given to
25 conserve energy more. The price signal is given

1 to expand the use of renewable energy. And the
2 price signal is given to develop alternative
3 sources, all here in the United States, sources
4 that aren't vulnerable to disappearing overnight
5 the way that a short-term purchase could disappear
6 overnight.

7 So, just to wrap up, I believe
8 essentially the fundamentals would be this. That
9 we face a much deeper problem that I believe is
10 generally recognized. I think we're just seeing
11 the tip of the iceberg with the price increases
12 that we've seen nationally and in California.

13 That we're likely to see far higher
14 prices for natural gas, oil, and electricity, that
15 could have a devastating effect on California's
16 economy, that there's an urgent need to try to
17 address those issues.

18 That one of the fundamental issues for
19 all of you to address, essentially, is what your
20 role should be, and whether it should be a
21 reactive or proactive role. That's for you to
22 decide, but essentially a lot of what's gotten us
23 into the dilemma we're in now is essentially there
24 is, the market itself, markets don't plan.

25 There is no one who is aggressively

1 going out and trying to develop a comprehensive
2 plan either at the national level or in
3 California, to minimize energy costs.

4 To minimize energy costs we need to do
5 two things. We need to expand the reliable,
6 uninterrupted supplies of energy, including
7 natural gas, and we need to do so from supplies
8 that are totally decoupled from the price of oil.

9 I haven't addressed that second point,
10 and I won't try because I've run out of time. But
11 on the first point, in terms of supplies, I have
12 put some specific slides in here with the
13 particular conditions that I would recommend. I
14 won't go through them because I've run out of
15 time, but I'll just refer to them to say that
16 they're there.

17 And thank you for your time and
18 attention.

19 MR. MAUL: Good, Andy, thank you very
20 much, a very provocative view here, and your
21 material you've submitted is really quite lengthy.
22 We'll have to go through it at length and probably
23 call you back afterwards with more questions on
24 that. So --.

25 Chairman Desmond, any questions?

1 COMMISSIONER DESMOND: Maybe it's more
2 some comments. You've covered a lot of ground,
3 Andy, and I heard a lot of what I thought were
4 conflicting positions, and I'm trying to resolve
5 those.

6 On the one hand, natural gas developers
7 not exploring domestically out of fear the market
8 would be flooded with LNG, and yet yesterday we
9 heard that FERC realistically expects only eight
10 terminals possibly to be financed over the entire
11 country.

12 So, on the one hand I -- and don't
13 respond until I've sort of gone through here --
14 how, what do you constitute flooding of the
15 market, would be my first question.

16 Second, the specter of \$120 barrel oil
17 hasn't come up in the conversations we've had
18 here. But again, I would indicate that both the
19 Energy Commission and the Governor has done what I
20 think is a fairly good job of laying out a
21 comprehensive approach at integrated planning that
22 looks at not just natural gas but diversity of all
23 fuels supplies, including renewables and
24 conservation.

25 So when we look at that it's obviously

1 with the express purpose of avoiding finding
2 ourselves in the position of over-relying on any
3 one particular resource.

4 The issue of increasing short-term gas
5 sales. You had said you believe in the market,
6 and then suggested a policy that would restrict
7 the reliance on short-term sales. And I guess,
8 again trying to reconcile --.

9 Although what we heard was that although
10 the US comprises a large share, percentage share
11 of that, but worldwide it was only approaching
12 about eight percent of sales in the spot market.

13 And the notion of withholding supply, in
14 the context of a global commodity, would suggest
15 conspiracy on a global level in order to exert
16 price pressure, but again there being some
17 substitute good, so --.

18 The two questions I actually have are,
19 in the context of the concern about price signals
20 and domestic exploration, what constitutes
21 flooding, if there's only half a dozen LNG
22 terminals in the US to supplement in the short
23 term.

24 And then the second question is,
25 regarding withholding, I'd like you to address it

1 in the context of yesterday's question, whether or
2 not you think terminal access provides a way of
3 mitigating withholding by opening the access to an
4 LNG terminal to other suppliers. So those are the
5 two types of questions.

6 MR. WEISSMAN: Let me try to respond to
7 each of those. And the first question is to what
8 constitutes flooding. The issue and the problem I
9 think is basically this, I think what counts in
10 terms of what happens in the market is the kind of
11 real world day to day perceptions and actors of
12 the actors in the market, perceptions and actions
13 I meant to say, of the actors in the market.

14 And they're not necessarily very well
15 thought out based on very detailed knowledge and
16 internally consistent. And I don't want to
17 suggest that oil and gas developers are of like
18 mind.

19 I spent a couple of hours just last week
20 with the chairman of the board and founder of one
21 of the top five producers and he believes, I don't
22 necessarily agree with him, but he believes that
23 the amount of LNG that will come to the country
24 will be small fraction of EIA's estimates and that
25 it will wind up being priced at a premium to oil.

1 And he's acquired more than a billion
2 dollars of natural gas assets this year alone,
3 because he's convinced that that's true.

4 My point therefore is essentially that,
5 having spoken with a lot of senior executives of a
6 lot of oil and gas companies, what I can tell you
7 for sure is that most of them, most of them,
8 believe that there will be enough LNG coming into
9 the country reasonably soon, in 2008, 2009, 2010,
10 so that the price of natural gas will wind up not
11 only going down soon.

12 And that belief of course is consistent
13 with EIA's public forecast. Now, what they don't
14 know is a couple of things. They don't know that
15 EIA only has a small team of people developing
16 their forecasts.

17 They don't know, because most of them
18 haven't heard the presentations, that when senior
19 people from EIA get up in public forums and
20 present their own forecasts, they often start by
21 saying "you know, personally I don't really think
22 that our position makes sense, and we're still
23 working on it and revising it."

24 All that they know is that they read all
25 of the discussion that suggests that there might

1 be very large amounts of LNG coming in to the
2 country, and they read the government forecast
3 that suggests low prices.

4 And so in that sense flooding means
5 enough to drive down prices, whatever that may
6 turn out to be.

7 And on the second question you raised,
8 on the terminal access and the withholding, I'm
9 struggling -- maybe it could be that I've not yet
10 found the right terms. I'm certainly not trying
11 to suggest that there would be any conspiratorial
12 action by Exxon Mobile or Conoco Phillips or
13 Chevron Texaco to deliberately drive up the price
14 of natural gas.

15 What I'm really suggesting is that,
16 functionally, the problem is the same. That the,
17 but for a different reason. To the extent that,
18 because LNG can be shipped and will be shipped to
19 anywhere in the world, to the extent that LNG is,
20 Jim used the phrase yesterday that it's self-
21 contracting, to the extent that it's controlled by
22 the super majors or other marketers, and to the
23 extent that they have not yet contracted it out on
24 a firm basis it becomes a very unstable source of
25 supply, where at any moment it may disappear as a

1 source of supply in the US market.

2 Not because it's being deliberately
3 withheld, but simply because it can fetch a higher
4 price by going to Europe.

5 Now, will allowing open access to US
6 terminals potentially, partially mitigate that
7 problem? I think it potentially could partially
8 mitigate that problem, but probably only
9 partially.

10 Because I think the problem is intrinsic
11 in any dependence on short-term purchases of LNG.

12 COMMISSIONER DESMOND: So maybe I can
13 just narrow the question down. Yesterday when we
14 listened to the folks from the investment
15 community they were pretty clear about saying
16 "we're not going to fund these unless there are in
17 fact some measure of long-term commitments and
18 long-term contracts", which would imply a good
19 portion of that capacity is locked up under a
20 series of contracts going forward.

21 So, again, back to yesterday's
22 discussion. Do you see a percentage that's
23 reasonable? I didn't hear you suggesting zero to
24 100, and I'm just trying to get an idea of whether
25 you think there is value in having a spot market

1 for LNG or are you suggesting that, if there is a
2 majority locked up and, you know, sovereign risk
3 issues aside, that that would be a better
4 approach?

5 MR. WEISSMAN: Again, I don't pretend to
6 be wise enough to know the right answer with any
7 certainty. But if I had to recommend a policy
8 today my policy would be, my recommendation would
9 probably be zero short-term.

10 And I would certainly say look at the El
11 Paso Pipeline situation, for example, in
12 particular. Most of the pipeline capacity on El
13 Paso was made available. The El Paso Pipeline was
14 only, is only a percentage of total pipeline
15 delivery capacity into California, and most of
16 that pipeline capacity was made available at every
17 point.

18 There was only a portion that was
19 allegedly withheld. And nonetheless, the belief
20 is, with substantial foundation, that the
21 withholding of that portion had a significant
22 effect on the price of natural gas and electricity
23 in the California market.

24 Whatever the size of that block is, I
25 wouldn't want to be depending on short-term

1 purchases of LNG of that magnitude, because I
2 think that would expose me to the same sort of
3 risk.

4 By the way, I conceptualize the
5 problem -- and maybe this is wrong -- is that, I
6 also think that importing LNG is a fundamental
7 shift. We saw in '98, '99 and 2000 we made a
8 fundamental shift and we didn't think it through
9 thoroughly enough ahead of time and it had some
10 terrible consequences.

11 I wonder if we had the opportunity --
12 this may seem kind of far out -- but if I came and
13 proposed today to supply electricity on generators
14 that were on boats that could and probably would
15 at some point be sent somewhere else in the world
16 because I could sell electricity for a higher
17 price, and I was willing to make spot market sales
18 into the California market now, would the
19 California officials approve a long-term energy
20 plan for California that anticipated that for a
21 period of time, by three or four or five percent
22 of the electricity for the state might come from
23 generators that were on boats that could wind up
24 being transferred to Europe or Asia or anywhere
25 else in the world at a moment's notice if there

1 were a higher price elsewhere.

2 COMMISSIONER DESMOND: Okay, thanks.

3 COMMISSIONER BOYD: Oh, I think just a
4 comment. I'm intrigued by a lot of what you say,
5 and I don't know if you're saying markets are
6 fickle, but I certainly think they are, and people
7 are too.

8 But as one who sat here looking at gas
9 very closely for the last, I guess five years,
10 when the sky fell on us in the electricity market,
11 I know the nation/state of California really tried
12 to send signals that we need more gas in our
13 future, and none of us were talking about LNG at
14 that time.

15 It's only in 2003, when the Energy
16 Commission did its Integrated Energy Policy
17 Report, that we said "look, we need gas in our
18 future." I think California has the most
19 diversified portfolio, by the way, of anyone, and
20 pushes efficiency as job one, and demand response
21 investment is huge, etc., etc.

22 But we're going to need more gas to fuel
23 our economy, and we were looking at people to
24 build pipelines to bring it here. There was just
25 no response, so as responsible public officials we

1 had to start talking about, you know, even a
2 pipeline from the west.

3 And so, maybe we've opened the door to
4 some terrible landslide, but it's hard to get a
5 response. And we all watched drilling very
6 closely, as everyone did for all those years, and
7 it was really hard to entice people to do any
8 more.

9 And this is in a world of two and three
10 dollar gas. I mean, I remember telling the
11 previous Governor that the glass ceiling is \$3.50,
12 and then sat there and watch them break it.

13 You mentioned it'd take five or six
14 dollar gas to entice a lot more drilling in this
15 country. And there was quite a bit even at two or
16 three dollars. So, I guess I'm just puzzled,
17 befuddled somewhat, and struggling, to find the
18 right course to recommend for California's future.

19 That's not a question, it's just more of
20 a statement. And you've just made some more
21 intriguing scenario that I don't necessarily
22 disagree with, because I agree that people are
23 fickle and markets are very fickle too.

24 But it just makes our task exceedingly
25 difficult.

1 MR. WEISSMAN: Can I make a brief
2 response to that, and a partial response to what
3 Chairman Desmond indicated earlier.

4 You're doing some really excellent
5 things, and I didn't mean to suggest otherwise. I
6 mean, this series of workshops is way ahead of the
7 curve in terms of looking at the potential
8 consequences of LNG much more proactively than is
9 certainly being done on the national level, or to
10 the best of my knowledge is being done in other
11 states.

12 And I think you certainly should be
13 applauded for that. And there is a much more
14 active, much better planning process here than
15 really almost anywhere else in the country. And I
16 didn't mean to suggest otherwise.

17 I think the problem, really
18 fundamentally, and it is partly the problem with
19 LNG, there are lots of them, but if I had to point
20 to one, the most fundamental problem is with the
21 information that we all start with.

22 And that is something where I think the
23 state has some reason to point to the natural
24 level and should be demanding more. Because
25 essentially the starting point for any integrated

1 resource planning process on the state level, to a
2 very large degree, in the end, whether it's even
3 explicitly clear or not, winds up being to a large
4 degree the assumptions regarding supply that flow
5 out of federal studies.

6 And essentially what's happened over a
7 long period of time is that the resources that are
8 devoted to developing those federal estimates are
9 a tiny fraction of what one might reasonably
10 assume that they would be.

11 And so it's certainly very natural, for
12 example, that there should not yet be, and I'm not
13 sure that there's any state around the country
14 that's yet done any planning for a scenario in
15 which we might have \$120 a barrel oil.

16 And we all heard Bob Howard yesterday
17 talk about how he wasn't aware that there wasn't
18 any energy price forecaster that predicted that we
19 would have the price levels that we have now for
20 natural gas.

21 Well, I have to tell you, there's only
22 one reason why, in my judgment, why those
23 statements are true, which is that we haven't
24 devoted enough resource to looking at the
25 fundamentals of supply and demand.

1 And the reason I say that is because I
2 have, I did actually predict the prices that are
3 occurring now. It wasn't really that hard to do.
4 It really just required understanding the
5 fundamentals of supply and demand, and that same
6 understanding suggests that there is a very high
7 likelihood that we will have \$120 barrel oil, and
8 a very high likelihood that probably relatively
9 soon we'll have \$12 or \$15 a million BTU natural
10 gas.

11 There's no state agency in the country
12 that's doing planning that looks at those
13 scenarios. But the reason is, basically, that
14 while EIA in particular is doing a lot with a
15 limited budget and has improved its work a great
16 deal over the course of the last few years since
17 Guy Caruso came in, it still fundamentally has
18 only a tiny fraction of the resources it needs.

19 It's still fundamentally letting us all
20 down, and the end result is that even when all of
21 you do a great job, you have tremendous talent
22 within your agency, you're looking at the right
23 issues, if you start with information that's
24 fundamentally wrong, and if the market starts with
25 information about supply and demand that's

1 fundamentally wrong, it's almost impossible that
2 the markets will get it right, and it's extremely
3 difficult for you to develop plans for the state
4 that anticipate the kinds of dislocations in the
5 market that we've already seen, let alone the ones
6 that I think are virtually inevitable in the next
7 year or two.

8 So, I guess if there were one point I
9 would recommend, it would be pound on doors in
10 Washington immediately to get the funding for EIA
11 increased by an order of magnitude. Because until
12 we get better information about energy markets
13 it's probably going to be impossible for any of us
14 to get this right.

15 MR. MAUL: Okay, thank you much for your
16 thoughts. It's very provocative, and we'll read
17 the material again, so, all right.

18 Our next speaker is Bill Powers of the
19 Border Power Plant Working Group. Bill, we
20 appreciate your coming up here today, and I
21 understand you were trying to do a little duty
22 with speaking at an EPRI/CEC conference.

23 So you're going from one CEC co-
24 sponsored event to a different one, and we
25 appreciate your stopping by today and giving us

1 your viewpoints on environmental issues associated
2 with open access.

3 MR. POWERS: Thank you, Dave. Thank
4 you, Chairman Desmond, Commissioner Boyd, and I
5 know I'm here as kind of the public interest
6 representative, and I am going to concentrate on
7 the consumer protection end of things, not on the
8 environmental.

9 And, to be consistent with the
10 objective, I would like to -- I have listened to
11 all the presentations this morning, and I'd like
12 to take 30 seconds to make a couple of quick
13 comments.

14 On Mark Hayes' excellent presentation,
15 one clarification that I thought would be useful
16 is that the Japanese LNG market is completely tied
17 to oil prices, it's a direct link, whereas in the
18 United States we're an isolated market, we're not
19 tied at all to international oil prices.

20 And the only reason I bring that up is
21 that the curve showed tracking of US and Japan
22 prices, and to me they're completely decoupled.

23 Also, as a result of being an isolated
24 market, three of our four existing LNG terminals
25 were shut down for 20 years when prices dropped in

1 the early 80's, and that there still is a
2 possibility, despite what Andy has said, that that
3 could happen again, if we were on a, construction
4 of terminals here.

5 Two, a question was raised about the
6 Skikda accident. I was provided the -- the DOE,
7 FERC did an accident study of that accident in
8 March of 2005 to determine a very interesting
9 question: how long did the leak happen before
10 that explosion occurred?

11 And I'll be happy to provide that to the
12 Commission. The ship supervisor walked between
13 train 30 and 40 five minutes before the explosion
14 occurred. The purpose of the visit by the FERC
15 and DOE team was to try and calculate how much
16 volume of whatever it was, LPG, LNG, or both, had
17 allowed an explosion of that magnitude and damage
18 to occur.

19 So it's a fascinating report and I'll
20 get it to you.

21 And Andy's presentation was great, I
22 agree completely with many of the things he said,
23 and I disagreed completely with many of the things
24 that he's said. First time that's happened to me,
25 and I'll go into that.

1 But one thing I do agree with is that
2 the Department of Energy has recommended a
3 complete zeroing out of the research and
4 development budget for oil and gas exploration in
5 the United States, which has caused howls of
6 protest from the domestic gas exploration and
7 production industry.

8 And this is a very unusual phenomenon,
9 but it almost seems as if the federal government
10 is on the bandwagon to make sure LNG is our future
11 and that we don't maximize our domestic resources.

12 Jumping in to my presentation, the
13 premise of this presentation, I want to spend a
14 few minutes on this, is that LNG is not a
15 necessity for California, and that any access that
16 is granted by the state should be at the
17 convenience of the state and not at the
18 convenience of the LNG developers.

19 We have an excellent Energy Action Plan,
20 which I think that -- we're trying to incorporate
21 both the spirit as well as the letter of that
22 plan, which is emphasizing what I think is exactly
23 the right approach for this issue of fuel scarcity
24 in the future, which has increased conservation
25 efficiency.

1 And that we need only add new fossil
2 generations, primarily natural gas-fired sources,
3 if these other two elements are not at hand and
4 ready to go.

5 The second lines of what I want to
6 concentrate on this slide, the DIA estimate, 1,400
7 TCF of reserves that we know we have in the US,
8 excluding Alaska, a 60 year supply at current
9 levels.

10 And I know that EIA does get bashed
11 quite a bit, but it is either the standard that is
12 either bashed or used, a point of departure not
13 only for people like me but for the investment
14 bankers that are looking at whether to do this.

15 And yesterday I gave a presentation in
16 San Diego, to the Chamber of Commerce. Shell
17 Trading followed, they used exactly the same
18 reserve number, 1,400 TCF, of which maybe a
19 quarter is on sensitive lands or offshore, most of
20 it is readily available.

21 This is from the California Energy
22 Commission, showing a 20 percent decline in
23 natural gas consumption in California over the
24 last four years.

25 And this is a very important point that

1 you don't often hear in these discussions, about
2 the dramatic decline in our natural gas use. And
3 my understanding is the CEC will be putting out an
4 updated curve which probably will show even more
5 gas decline, I'm guessing, based on recent CPUC
6 decisions. But we'll wait to see.

7 Going back to the EIA, I'm going back a
8 little bit in time, this is a two year old
9 projection. The line of most importance is the
10 red line showing a modest but steady increase in
11 US domestic production over the next 20 years.

12 The reason I bring this up is that I
13 have been heavily involved in the CPUC gas
14 proceeding for the last nearly two years, and this
15 was the information available when we started, the
16 discussion about LNG, showing a modest but steady
17 increase in domestic production.

18 At the same time LNG developers, on in
19 particular, were showing a spectacular decline in
20 domestic production, which ultimately ended up
21 framing the discussion of our need to import LNG.

22 In fact, framed the discussion in such a
23 way that it was determined we had to have it, as
24 opposed to whether it was an option.

25 Data that's been put out. CEC does an

1 excellent job of putting out high quality analyses
2 on our energy options, and in this case currently
3 we're using about 5,500 million cubic feet a day,
4 but the line I want to focus on is the last line.

5 Further potential reduction in
6 California gas demand from low cost energy
7 conservation and renewable energy targets. We're
8 talking about energy conservation measures that
9 are less costly than combined cycle and natural
10 gas generation at \$5 an MMBTU gas. This is the
11 most cost-effective option we have right now.

12 And then assuming renewables target that
13 we already have in the pipeline, 33 percent by
14 2020. That's the equivalent of two liquefied
15 natural gas terminals over the next 10 to 15
16 years, which is really all we've been talking
17 about in our discussions in the state.

18 Overdependence on natural gas price
19 manipulation has been a constant backdrop to these
20 discussions. CEC has done a good job of
21 identifying that as well. We're projected to
22 increase our natural gas consumption for fuel
23 generation.

24 Yes, it could be an opportunity to
25 access supply from foreign countries, might help

1 on price, but it would also incur a dependence on
2 foreign sources of supply.

3 And currently, and what I want to
4 concentrate on for about a minute, is bipartisan
5 federal legislation proposed to regulate natural
6 gas traders, proposed in April of 2005, and to
7 point out that the project with the inside track,
8 but by no means a certainty, the Sempra-Shell-BP
9 Project in Baja, California, collectively those
10 three companies trade 50 percent of the natural
11 gas traded in the United States.

12 These are the super majors. These are
13 the absolute big boys in gas trading. This
14 legislation is actually quite fascinating. It's
15 bipartisan, Republican/Democrat. Objective is to
16 bring some stability and predictability and
17 reliability of gas market.

18 Underscores in the text the recent gas
19 price spikes, a result of increased speculative
20 trading, imposes new price limits on natural gas
21 futures trading, blames the price spikes not on a
22 paucity of supply but the implementation of the
23 Commodity Futures Modernization Act of 2000,
24 altering the fundamental trading rules, much
25 greater speculation.

1 California has been completely missing
2 in action in this push for legislative remedy to
3 natural gas market gaming. I think we're so busy
4 litigating the manipulation from 2000/2001 we have
5 not gotten involved in this.

6 The legislation targets market power and
7 extreme price volatility. Numerous trading firms,
8 including Shell Trading, have paid hundreds of
9 millions of dollars to the Commodity Future
10 Trading Commission and the FERC to settle charges
11 of market manipulation.

12 The market is not transparent. One
13 trader may easily control a large percentage of
14 the market. Prices are ultra volatile.

15 Basically, no meaningful and effective
16 circuit breakers to prevent extreme price
17 volatility.

18 Ultimate objective, reform the Commodity
19 and Exchange Act to restore transparency and
20 address price volatility in a natural gas futures
21 market.

22 In Texas this is the number one
23 objective, and the push behind this is the
24 petrochemical industry in the United States.

25 Now I want to switch back to what DOE

1 did -- again, this is the data that was made
2 available to us as we went through the CPUC
3 proceeding.

4 It was about a year ago where EIA is
5 projecting that the wellhead price in the United
6 States, in 2025, in current dollars, could vary
7 between \$3.80 and \$4.40, without a dramatic
8 reduction in exploration and production activity.

9 At the same time, they were predicting
10 that to import LNG to California the cost would be
11 around \$4.50. So clearly the ability to compete
12 in doubt in a rational natural gas pricing
13 environment.

14 Again, whether this is correct or not is
15 not as important as the fact that this is
16 fundamental information investors are looking at.

17 Solution. If you're trying to build a
18 facility to the price risk that would be involved
19 in spot or gas on gas competition. This is the
20 workshop that we had in December 2003. This is
21 just a page out of the Shell Trading presentation,
22 pushing very hard to open up port gas contracts in
23 the California utility gas market to LNG supplies.

24 All of this, by the way, was
25 incorporated in the decision that came out of the

1 CPUC. The issue with poor supply is gas provides
2 you with long-term security of supply, and as the
3 CEC has pointed out in their documents, it exposes
4 the ratepayer to an inflexible system where, if
5 there are price breaks to be had by developments
6 you won't take advantage of those as the
7 ratepayer.

8 A couple of points here, interesting
9 situation. I know an El Paso speaker will speak
10 later today. El Paso and Transwestern weren't
11 throwing in the towel on production from their
12 basins.

13 They're saying we can produce, and it's
14 not a good idea to allow utilities to potentially
15 permanently terminate capacity contracts with us
16 and be substituted by LNG, that we should at least
17 maintain that capacity as a hedge.

18 And ultimately the lack of any
19 evidentiary process in this procedure has resulted
20 in a challenge to it. This is not necessarily
21 over, this decision from last year.

22 Interesting issue just came up in the
23 Gulf of Mexico where the Coast Guard has put a
24 hold on numerous liquefied natural gas proposals
25 over the cumulative impact of using seawater for

1 re-gasification at those facilities.

2 And in contrast, we have no regulatory
3 authority over Mexico or Baja, California, this is
4 the exact same thing going on in Baja, this
5 seawater issue. It's resulted in a stop. Also, a
6 Fifth Circuit case in the east on these terminals.
7 And those Mexican terminals are potentially moving
8 forward.

9 This is December Shell/BP project in
10 Baja. Interesting aspect of this, again, to
11 date -- and I know many people in the state are
12 under the impression it's a done deal -- to date
13 what has occurred at the site is earth moving,
14 earth preparation. No facility has been poured,
15 nothing significant has yet started.

16 The plan is, one BCFD to start with the
17 two tanks, expand to two BCFD. that would cover
18 the entire Southern California core gas market as
19 well as any foreseeable Mexican market in the
20 foreseeable future.

21 The problem for California is market
22 power concern. Partners in that particular
23 concern control 50 percent of the gas trading
24 market. It's a closed access facility. Affiliate
25 transactions between Semptra or the partners and

1 Semptra's affiliate, SoCal Gas and SDG&E, are
2 almost inevitable and likely critical to the
3 actual buildout of this facility.

4 And not that the ratepayers will pay for
5 the buildup of the facility. It's the contracts
6 over time that will allow investors to recoup that
7 investment.

8 We have no regulatory authority in
9 Mexico, and we also have an interesting situation
10 developing in Mexico which has developed in other
11 Latin American countries. Mexico is quite likely
12 at this point to get a left-leaning, anti
13 multinational government next year.

14 Right now it's a very market-favorable
15 environment. And Mexico is not Canada and is not
16 the United States. It is not the same level of
17 stability.

18 The current approach that we have, the
19 de facto approach, is the Japanese model. We've
20 got \$5 billion plus supply chains proposed, no
21 spot cargos, long-term ratepayer contracts will
22 serve as anchor contracts for the investment.

23 And the premise is being sold on supply
24 diversity, that whatever price we pay it's the
25 supply diversity to the declining US gas.

1 In contract, as Andy already went
2 through, we've got a spot market primarily on the
3 East Coast, and you can actually get started in
4 that spot market very inexpensively relative to
5 these greenfield chains, and they do provide gas
6 on gas competition, it does drive down price in
7 the day to day market.

8 Immediate price relief, which I think is
9 really what we are interested in in California,
10 not necessarily four years down the road.

11 Another interesting fact, from Cambridge
12 Energy Research. We have an oversupply of
13 liquefaction capacity in the Far East right now.
14 The equivalent of approximately one BCFD of
15 oversupply in the Far East. That's projected to
16 last at least five or six years.

17 And that allows us at least the elements
18 to have a spot market on the West Coast. As all
19 of these major greenfield projects slowly move
20 through the process, the newest US terminal to
21 start up, March 2005, is the accelerated terminal
22 100 miles off the Gulf of Mexico, moving hot gas
23 spot cargos to Henry Hub upstream of gas process,
24 and the gas will eventually be processed.

25 Somebody's taking a risk. It's also a

1 billionaire that brought three ships and he is
2 going for it in the classic, American "take the
3 risk, take the reward", as opposed to the process
4 we have going out here, which is to eliminate risk
5 to the project developer.

6 One issue that came up in the CPUC
7 proceeding which is fascinating to me is that,
8 ultimately, moving LNG into the Gulf of Mexico
9 will have essentially the same beneficial effect
10 on the California market as moving it to
11 California.

12 You're relieving pressure to move a
13 permanent base in San Juan Basin supplies each,
14 and freeing them up to move west. The same
15 competitors in the West Coast market are proposing
16 facilities in the Gulf. Semptra, Chevron and Shell
17 all have projects there.

18 Shell's got a project under construction
19 in the Gulf of Mexico, in the country of Mexico,
20 which will receive cargos from Nigeria.

21 Just a brief moment on the environmental
22 issues. That gas has been flared for years in
23 Nigeria, it's an environmental disaster. It's
24 being converted to LNG and moved into productive,
25 good use of it.

1 In contrast, the greenfield proposals on
2 the West Coast, we'll be developing some of the
3 most pristine areas in the Pacific Rim to get this
4 LNG to California. And obviously proponents who
5 find the hurdles too high in California have other
6 options of getting LNG into the United States.

7 One comment on gas quality
8 specification. The, bumping up the, bumping up
9 the BTU content, will have air emissions impacts
10 on stationary sources. This is a rough
11 calculation. And given the relatively incomplete
12 information we have, very rough, but up to 1,000
13 tons a year of additional NOX emissions in the
14 south coast, an extreme non-attainment area as a
15 result of bump up through relaxing gas
16 specifications.

17 Right now both CNG and diesel
18 manufacturers are pushing hard to meet
19 extraordinarily low emissions requirements for
20 2007 and 2010. We change the gas spec now and
21 they may be pushed back quite a bit in their
22 attempts to meet these ultra-low standards.

23 We need some more research before we
24 understand just how much impact it's going to
25 have. And again, my perspective in representing

1 the public interest perspective, LNG is not
2 critical to California's future.

3 The honus should be on the LNG suppliers
4 to meet that ARB specification, not on California
5 to accommodate the supplier's desires to minimize
6 cost.

7 Conclusion. Again, not a necessity for
8 us, an optional item. The function of LNG, if
9 any, should be gas on gas spot competition where
10 the supplier is taking the risk, not the
11 ratepayers.

12 Utility core contracts should be
13 explicitly prohibited between affiliates and
14 partners of affiliates to minimize the potential
15 for non-transparent contracting.

16 In reality, the gas utilities should be
17 divested from the parent, in this case, to avoid
18 an extraordinarily conflicted situation.

19 Spot cargo model will work for at least
20 five or six years due to excess Far East LNG
21 production capacity. That puts the price risk on
22 the shipper, protects the utility ratepayer from
23 long-term contract exposure, and it is the
24 responsibility of the LNG provider to meet our
25 rules in California, to protect the rules.

1 And if they can't do it then they can
2 take advantage of other options. Thank you.

3 MR. MAUL: Okay Bill, thank you very
4 much, some very good thoughts there. Chairman
5 Desmond, do you have questions?

6 COMMISSIONER DESMOND: Just a general
7 comment. I want to thank you, Bill, for putting
8 together a well thought out presentation. Is it
9 your understanding that the spot cargo model in
10 the East Coast is leading to new terminal
11 construction, or that it is taking advantage of
12 existing infrastructure?

13 MR. POWERS: Well, I think the novelty
14 there is that, because many of the proposals are
15 now floating and have onboard re-gasification
16 systems, that the model would be realistic for the
17 West Coast would be an offshore, a similar
18 situation, offshore, floating, re-gas, with a pipe
19 that hooks in to a utility gas system.

20 It would almost be trivial enough, in
21 that context, that it would not have required a
22 gas proceeding. A simple advice letter type
23 arrangement would have allowed a system like that
24 to work.

25 COMMISSIONER DESMOND: Just a followup

1 question. You talk a lot about the issue of gas
2 on gas competition, which came up in yesterday's
3 discussion. As you think about that, some of the
4 other speakers yesterday looked at LNG as simply a
5 terminal event, with the same types of access
6 rules, and interstate transmission should apply or
7 should be thought of in that context.

8 Is your group or have you given any
9 thought to that perspective?

10 MR. POWERS: Oh yeah, without a doubt.
11 I think that if any terminal is built -- for
12 example the Semptra proposal is to be a tolling
13 terminal in Baja, and it's tolling for one
14 customer or two.

15 But in reality the best advantage for
16 California would be having these open access
17 terminals where anyone can turn up and deliver
18 cargo.

19 COMMISSIONER BOYD: Good to see you
20 again, Bill. The reference to, I mean, you and I
21 have talked about this so much I don't have any
22 questions, but the reference to the ARB
23 regulation, you know that's a multiple source only
24 regulation, and your concern is with regard to the
25 general NOX increase from stationary sources.

1 And I think you know that's being
2 addressed by a working group, and we had a special
3 hearing on that subject, so more to follow I'd
4 say, watch that space.

5 But it's a very diverse, very
6 complicated issue, as you know, and I don't think
7 anyone wants to impair the California environment
8 or there's any impetus to help the proponents of
9 LNG at the expense of the California environment.

10 So, anyway, a lot of work's going on on
11 that issue, as you know.

12 MR. POWERS: Thank you.

13 MR. MORRIS: Bill, one question.
14 Whether the LNG is supplied under long-term
15 questions or under spot contracts, with \$6 a gas
16 right now, why wouldn't additional supplies of
17 natural gas help put downward pressure on the
18 price of natural gas in California?

19 MR. POWERS: Why would additional
20 supplies put downward pressure, or would not?

21 MR. MORRIS: Why wouldn't it put
22 downward pressure. You seem to indicate that we
23 don't need the LNG, but why wouldn't it put
24 downward pressure on the price of gas?

25 MR. POWERS: I think there are two

1 aspects to the answer. One aspect is I really
2 think that current natural gas prices are divorced
3 from fundamental supply/demand arithmetic, that we
4 do have a situation of excessive control and
5 excessive deregulation that is keeping prices
6 excessively high.

7 So first you have to accept in your
8 question is \$6 reflecting supply/demand
9 fundamentals, or is this price well above what
10 those fundamentals would provide.

11 Then the next question is, let's say if
12 we had a market that was actually a competitive
13 market, and we had prices that were in the DOE
14 range, \$3.50 right now for example.

15 In that case I doubt you'd see any spot
16 cargos coming to the West Coast, even if they had
17 the ships and other equipment available, because
18 they couldn't compete at \$3.50 an MMBTU. So there
19 are a couple of dynamics there in order to answer
20 the question.

21 If the market, in a competitive
22 situation, leveled out at \$5, and someone could
23 bring spot cargos in at \$4, then you would see
24 some price relief by having those spot cargos
25 coming in, in my opinion.

1 By the way, that's exactly why three of
2 four US LNG terminals got shut down in the early
3 80's is, we had prices high enough to support spot
4 cargo imports of LNG, the industry was
5 deregulated, the US domestic industry was then
6 providing gas that was at a level that was below
7 the break even point of imports, they mothballed
8 all the facilities.

9 MR. MAUL: Okay, Bill, thank you very
10 much.

11 MR. POWERS: Thank you, Dave.

12 MR. MAUL: We'll look at the material
13 you have here. Thank you.

14 All right, our last speaker this morning
15 is Lawrence Smith, he's a Partner at Bennett Jones
16 out of Calgary, and Lorry has provided a very
17 extensive paper for us to review on international
18 trade issues, looking at it from a Canadian
19 perspective, on the gas markets in particular,
20 which we will have to review at a later time.

21 But Lorry's got a very good presentation
22 for us today, and he'll try to summarize some of
23 the issues that you see that we should be
24 considering, dealing with access issues and
25 particularly multi-country access issues.

1 MR. SMITH: Thank you very much, Dave.
2 Commissioner Desmond and Commissioner Boyd, it's a
3 real honor to appear in front of you and to be
4 asked to provide some thoughts on jurisdiction and
5 access.

6 There's two aspects to it. The first is
7 one that I'll deal with through an overview of
8 Canadian developments. The state/federal split in
9 California has been a matter of some interest.

10 It is the same issue that we've been
11 going through on the Canadian side, and if we're
12 all here trying to deal with the core customers,
13 particularly people on fixed incomes who show up
14 at gas cost hearings and simply say "I can't pay
15 \$6 and \$7 an MCF for gas", then we've got
16 something that we have to deal with, and we've got
17 to find ways to encourage the new supply.

18 The first part I wanted to cover was, we
19 have a couple of plants on the East Coast, in Nova
20 Scotia and New Brunswick. You'll see the green
21 dots, which have already been approved, one of
22 them, the Anadarko Project, which is on the south
23 shore of Cape Breton, is under construction.

24 In fact, the second storage tank pad is
25 under construction right now, the first is

1 actually awaiting fabrication, it's moved to that
2 stage.

3 The Irving plant is one sponsored along
4 with Repsol, and it is also approved, not quite as
5 far advanced in terms of construction. There will
6 be a proceeding to deal with a international
7 pipeline expansion on maritimes in Northeast to
8 take it to market.

9 I'm drawing your attention to it because
10 I think there are some analogies with the Baja.
11 This is a part of the world where there is no
12 other access provided, gas supply-wise at least,
13 to the maritime region of Canada.

14 It is solely dependent on the offshore
15 supplies. And they have been very disappointing.
16 There has been great concern about the prospecting
17 activity on the Scotian shelf.

18 So you've got some analogy, with the
19 situation in the Baja also isolated from other
20 sources of supply, and that brings with it issues
21 of, I think, heightened concerns, about access,
22 both international and national, and of course
23 commercial and regulatory.

24 The other project that I'm involved
25 with, we are involved with both of those, is

1 Kitimat, British Columbia, on the other coast. It
2 is undergoing the environmental review process
3 now. There are a couple in the St. Lawrence which
4 are, again, just under environmental review at the
5 moment and are a ways off.

6 Initial deliveries, I would think,
7 probably no earlier than late '07-'08, but we're
8 sort of in that '80-'09 time frame on the East
9 Coast, and something thereabouts on the West Coast
10 if everything continues to go well.

11 Another point, again just physically,
12 it's an interesting fact situation and I don't
13 know the economics really that support it, but we
14 do have a transit pipeline treaty between Canada
15 and the United States, and were you to take kenite
16 LNG cargos for example and transport them to
17 Kitimat, then in fact you'd probably be operating
18 under the transit pipeline treaty, if you were
19 transiting any of the re-gas into US markets,
20 whether in the Pacific Northwest or in California.

21 This is just a little more detail on
22 those plants which is available. I should note
23 that the slides have more on the Canadian overview
24 than the paper does. The paper is heavily focused
25 on the trade law and a lot of excerpts, including

1 the relevant excerpts form the trade agreements
2 and GATT, and I wanted to spare everybody that on
3 slides.

4 On Anadarko and Canaport, both in the
5 maritimes, the terminals were approved
6 provincially. They were not federally approved or
7 sited. There is a joining federal provincial
8 environmental assessment process, because you
9 can't build a project of this magnitude without
10 engaging both jurisdictions.

11 But the people who said "yes, here's the
12 permit to build" were provincial. That would be
13 true for refineries, it would be true for tank
14 farms, and in many ways an LNG re-gas facility is
15 just a tank farm with a box to warm up the LNG and
16 pumps to put it at pressure into the mainline
17 system.

18 Toll access, to respond to the issue of
19 open access, I think the way really this will spin
20 out for the foreseeable future is to allow the
21 developers to establish contracts and make use of
22 the facility wholly.

23 The issue of third party access hasn't
24 really been that focused, and I think for a good
25 reason. Something like energy bridge, for

1 example, is a very unique customized tanker
2 arrangement. And it really will only be able to
3 use the mono buoy setup that they have, and my
4 understanding is that the one on Boston is
5 actually outside state and federal jurisdiction.

6 But for every other terminal you ought
7 to have the terminal configured to accept cargos
8 from as many places as possible, that's true.

9 At the same time, again, there is this
10 great concern about how much money and what a
11 commitment it is to really put together all the
12 infrastructure back into the field to ensure that
13 the supply is available, and for that reason I
14 think there's been deference accorded the
15 developers in terms of access or exclusive control
16 of the facility.

17 At the moment there aren't a lot of
18 people knocking on the door asking for third party
19 access to deliver cargos, and that's another
20 thing. And so, from my perspective, if the
21 principal objective of this exercise is to secure
22 additional supply, particularly long-term supply
23 that will always be there, then you might want to
24 err on the side of limiting access.

25 The industry, in Canada at least, has

1 generally seen this as a facility that's more like
2 part of the production facility. It's like a gas
3 plant.

4 If you go into Alberta or into the
5 producing regions of the United States you can get
6 regulatory access to a gas processing plant, but
7 there tends, again, to be more deference accorded
8 the operator, you generally look upstream at their
9 other operating circumstances, and if there's a
10 good and valid reason why to maybe keep slack
11 capacity in the system, you let 'em do it, rather
12 than potentially disrupting the arrangement.

13 In terms of Canadian import and export
14 jurisdiction, that is of course federal, and it is
15 something well familiar to the state of
16 California. We have long-term licenses, we have
17 short-term permits, under two years.

18 In the context of LNG we have developed
19 some draft information requests for LNG import
20 applications. They tend to be, I think, laissez-
21 faire, I think an inclination not to reveal a lot
22 of the proprietary terms of the arrangement.

23 Many of these projects, of course, have
24 the export market as really the anchor tenant.
25 Not all, but certainly the ones on the East Coast.

1 But that information is available on the NEB
2 website if it's of any interest to you.

3 There are imports for re-export permits
4 that are allowed, and of course our export
5 policies are governed by international agreements.

6 The three principal agreements are the,
7 really it should have been in reverse order --
8 GATT and the Free Trade Agreement. The Free Trade
9 Agreement really built on GATT, and I'll come to
10 that in a little more detail.

11 That was in 1989, and it was followed
12 five years later by NAFTA. And there is an
13 environmental side letter which I'll make brief
14 reference to.

15 The NAFTA Agreement added a couple of
16 things. One of them, which certainly the
17 California Energy Commission would understand and
18 know well, was the admonition that regulators
19 ought to try and do all they can to avoid
20 disrupting long-term contracts.

21 That's as important or more important
22 today than it's ever been. I don't think it's a
23 good idea to make a decision on access to LNG
24 terminals on the premise that three years later or
25 five years later you change it. People need to

1 order their affairs, they need to have the
2 certainty, let's get the rules square at the
3 outset, whatever they may be.

4 And then the transit pipeline treaty,
5 which was actually signed in 1977, in and around
6 the time of the Alaskan Project. And if you
7 really wanted to get into this academically, there
8 are specific Alaskan-related trade terms which I
9 haven't featured in this paper, but there may be
10 some useful analogies as we go forward with
11 transit arrangements.

12 Of course, Canada and the United States
13 have had a long history of border accommodations,
14 mostly from Canada to the States, but not
15 exclusively.

16 The Free Trade Agreement again, I think
17 rather than getting into all the details of it,
18 basically, no export prices that are
19 discriminatory, no taxes that are discriminatory.
20 It also ensures that, in the event of shortfall,
21 you would try and then use proration of the
22 available supply to the existing users.

23 But what's really important here is to
24 recognize two things. First, GATT does have
25 provisions along these lines. GATT, as developed

1 a little further in the paper, had an equitable
2 sharing obligation which was expected of its
3 members.

4 Now, obviously, given GATT was 1937,
5 there was more that was thought necessary, and
6 that was built on in the context of the Free Trade
7 Agreement. And so there were in fact three what I
8 would call super added conditions that enforced
9 and enhanced the GATT protections.

10 That's important because Mexico did not
11 endorse through NAFTA these what I call Free Trade
12 Agreement add-ons, but Mexico did affirm GATT, and
13 I'll come back to that in a moment.

14 The Free Trade Agreement certainly did
15 acknowledge that Canada could continue to do
16 export surplus tests, but they had to be done in
17 accordance with the Free Trade Agreement, and of
18 course there were dispute resolutions provided.

19 I think I've already touched on, you
20 know, at a high level what the NAFTA protections
21 have done over and above what were done the Free
22 Trade Agreement.

23 Again, in the context of this, there was
24 a issue politically, an interpretive issue of how
25 a proportionality provision would work.

1 I just want to pause for a moment to
2 observe that, to me, the principal benefit of the
3 Free Trade Agreement and NAFTA was to say "let
4 the market work." It isn't that Canada has to go
5 out and pummel somebody into buying Canadian gas
6 to maintain the proportionality provisions.

7 If people don't want to buy the gas they
8 don't have to buy the gas. If they put terms and
9 conditions in their contracts that would cause for
10 a discontinuation of supply, that's up to those
11 parties to do. So, the Free Trade Agreement
12 really says let the market work.

13 Now, what it also does, it was a
14 negative covenant on the part of government, don't
15 intervene in this unless you get into some sort of
16 extraordinary circumstance. You have this
17 proportionality issue, look at what the market
18 did, how they worked it out commercially, and only
19 then might you be able to take some action, but
20 that action cannot, for example, take all the
21 shortfall out of the export market.

22 And that's the way it works. But the
23 first stop is the market itself. Why is that
24 relevant in the context of Mexico?

25 Well, consider the fact situations. I

1 really think you have to be careful about
2 exaggerating theoretically the significance of
3 Mexico not having proportionality but Canada
4 having it.

5 Canada exports a very considerable
6 amount more of gas to the United States than does
7 Mexico. And when you heard Henry Morse yesterday
8 say that the load in Mexico was 40 million a day
9 at the moment or for the foreseeable future, and
10 you have a BCF and a half a day coming through,
11 what difference would proportionality really have
12 in terms of benefitting the United States in
13 reliability of supply. It wouldn't be that great.

14 Although you have to look at this
15 nationally, and look at what else is being done
16 elsewhere. Canada is the same, but Canada,
17 because it supplies so much gas to the United
18 States, if there were a shortfall on the East
19 Coast you might be able to make it up from the
20 West Coast, again commercially, because a lot of
21 the same players are suppliers of gas.

22 For example, Shell, from both basins.
23 Or from the Gulf. So, again, the market has a lot
24 of resilience and a lot of flexibility to fill in
25 where there are problems. And I think you can see

1 the analogy with the Baja and the Southwest and
2 Permian and so forth.

3 So, I think, my suggestion is you may
4 not need to be as prescriptive about these things
5 as you might think. That there's a good framework
6 there already.

7 I wanted to touch on the environmental
8 side letter. This was more of a concern that
9 there might be a failure to enforce environmental
10 standards or laws, and I think the clear
11 implication was, for some commercial benefit to
12 the country in question.

13 And it is generally talked about in the
14 context of Mexico, fairly or unfairly, and I think
15 obviously because on the face of it Canadian and
16 US environmental assessment laws are very, very
17 similar. I think the Mexican laws are a little
18 different, and that's where we get into these
19 discussions.

20 I think the principle benefit of this
21 development was publicity. It is not something
22 that I think can race in and intervene necessarily
23 in a particular docket. I think you run into very
24 serious factual questions about whether that
25 jurisdiction was enforcing their laws.

1 In every one of those cases there is
2 considerable discretion as to what is or isn't a
3 significant adverse environmental effect or what
4 is an adequate mitigation measure. But it does
5 have a cautionary effect upon, as the side letter
6 states, "persistent non-enforcement."

7 The transit pipeline treaty, again,
8 important and I think overlooked. Don't interfere
9 with the throughputs, and don't discriminate in
10 terms of the tolls, the taxes, or the charges.

11 There are a number of pipelines, I
12 didn't list them all, but there are a number of
13 them which actually benefit by this.

14 In fact, the transit pipeline treaty has
15 often been sited -- I shouldn't say often -- but
16 certainly not infrequently sited before the
17 National Energy Board to ensure that there wasn't
18 discrimination for transit movements of gas into
19 the United States, for example.

20 I did give you the theoretical or
21 hypothetical possibility of a transit arrangement
22 involving US production landing in a place like
23 Kitimat and into the US.

24 I think there's another one which might
25 well be gas secured by Shell in the Sakhalins,

1 shipped to a place like Kitimat, and a long-term
2 contract entered into to sell to, let's say,
3 Washington or Northern California.

4 I would take the view that the transit
5 pipeline treaty probably would protect that as
6 well. We have the same thing with the Portland-
7 Montreal oil pipeline where you land cargos in
8 Portland Harbor and then move them up into the
9 Montreal East Refinery by means of that pipeline,
10 and it's benefitted by the transit pipeline
11 treaty.

12 We've already talked, I think, about
13 Mexico. The thing I wanted to flag to you was,
14 Mexico had a firm GATT in NAFTA. And there is a
15 subtle thing, which I've drawn out in the paper,
16 which I think you may want to go back and look at.

17 When the final protocol of the session
18 of Mexico to GATT was passed, this was back after
19 GATT was enacted, it had made, to even the GATT
20 provisions, a bit of a qualification. And rather
21 than reading it into the record here, suffice to
22 say that it really sought to give them more
23 deference over the control of natural resources
24 than a literal reading of GATT might have
25 permitted.

1 There are a number of commentators who
2 take the view that in the NAFTA discussion, though
3 Mexico did not go so far as Canada, it
4 nevertheless affirmed GATT and appeared to
5 diminish or if not withdraw to qualify the earlier
6 qualification they'd placed on GATT.

7 So there is some smaller degree of
8 comfort in terms of access under treaty rights, I
9 think, available under NAFTA visavis Mexico than
10 had been the case in the past. And I want to
11 hasten to add, as I've said in the paper, we don't
12 hold ourselves as trade experts on Mexican trade
13 law.

14 GATT is not a simple document to
15 understand, and it really operates more by
16 international conventions as does all
17 international trade law. So this is something
18 you're going to want to reflect on pretty
19 carefully.

20 I really thought I would juxtapose the
21 two situations, I think I've described them
22 already. The more significant point, though, is
23 at the bottom. You really have to look at what
24 the facts are, and whether the absence of a formal
25 proportionality provision in the trade agreement

1 with Mexico makes that much of a difference in the
2 practical circumstances of that trade arrangement.

3 And that's all I had. Are there any
4 questions?

5 MR. MAUL: We want to thank you very
6 much, that was very helpful. Monica?

7 MS. SCHWEBS: Two questions. We talked
8 about this earlier today but, we were talking
9 about the commodity approval requirements in the
10 United States, section three of the Natural Gas
11 Act, which gives us automatic approval for LNG
12 imports to the United States.

13 But the pipeline imports, the provision,
14 depend upon whether there's a free trade agreement
15 requiring national treatment in natural gas, which
16 is clearly the case with respect to Canada, but on
17 your review of NAFTA have you come to a conclusion
18 that that provision would not apply visavis
19 Mexico?

20 MR. SMITH: When we had that discussion
21 I made the observation that that provision of the
22 US federal law, that a import authorization from
23 an FDA country had to automatically be approved
24 without delay arose because of the fight the
25 Independent Petroleum Producers of America had

1 against Canadian imports going in to New York City
2 by the Iroquah (sp) project years ago.

3 And it is interesting it should come up
4 in this context. When we discussed this
5 informally on the steps I told you I didn't think
6 that the Mexican arrangement did afford national
7 treatment.

8 I was looking at my notes after we had
9 that discussion, and I'm not entirely sure but I
10 believe that your conclusion is correct, that it
11 does not affirm national treatment in the way that
12 the Free Trade Agreement does, and therefore you
13 would have to go through what were the old style
14 determinations, that it was in the US public
15 interest to effect the import.

16 MS. SCHWEBS: And one second question.
17 I know this is subsumed in your paper, but it's a
18 little difficult to exactly figure out which
19 provisions would not apply, visavis Mexico, that
20 do apply visavis Canada.

21 And particularly I'm thinking about
22 discrimination provisions. Could you just run
23 down those quickly for us?

24 MR. SMITH: Perhaps I can give you the
25 methodology, because the reason I found it

1 difficult, and again Mexican trade law would not
2 be the thing I do as a matter of course. I can
3 tell you on the Canadian side how it would work.

4 But the way that the agreements are
5 framed, there is GATT and then there is an
6 affirmation of GATT, and then there was the
7 ability to reserve, and so Mexico chose to reserve
8 on certain stated matters, including foreign trade
9 in hydrocarbons, and for sure gas fit within the
10 definition.

11 And that included trade law and so
12 forth. the problem is that the definitions in the
13 section on reservations, Annex 6032, were
14 extensive. And it wasn't just the one section,
15 there were a series of others.

16 And they went through a series of things
17 like processing of different hydrocarbons and
18 different byproducts, all, you know, commercial
19 matters. And probably the reason they get into
20 that level of detail is because it has to do with
21 the customs and tariff clarifications.

22 So the discrimination provisions I
23 believe, at the end of the day, are -- the ones
24 that appear in the Free Trade Agreement -- are not
25 carried forward into the arrangement with Mexico.

1 But, again, it's qualified and difficult
2 to work through. Start with GATT, and take into
3 account the protocol excision was identified by
4 the Mexican government at the time, a ratified
5 GATT.

6 Then look at the NAFTA where there was
7 the affirmation of GATT in about two or three
8 sections of the agreement -- and they're all
9 attached to the [paper by the way -- and it's
10 there that you say "okay, so this is GATT and the
11 GATT stipulations in the current environment."

12 And then you have to read 'em down by
13 the reservations. And so I think there is
14 something of a gray area there about the extent to
15 which it undermines the principle of non-
16 discrimination altogether. It's not simple.

17 MS. SCHWEBS: One final question, it
18 also isn't simple, but isn't LNG, in most cases,
19 not produced in North America, and the provisions
20 of NAFTA apply to the things that are produced in
21 North America.

22 Is there a chance that LNG coming
23 outside of North America is not covered at all by
24 the provisions of NAFTA?

25 MR. SMITH: I'm sorry, Monica, I should

1 have made that clear at the outset, because that
2 was the basic question.

3 Under both the Free Trade Agreement and
4 under GATT there is a definition of total supply.
5 And the definition of total supply has three
6 subparts, but the third one says "and imports as
7 appropriate."

8 Now there is some academic debate on
9 what "as appropriate" means. My sense in the
10 context is that when you look at total supply it
11 is the total supply, including whatever imports
12 you have.

13 So the answer to the question, where I'm
14 sitting today, is probably all of the LNG imports
15 into Canada, for example, would be included as
16 part of the total supply. And because Mexico had
17 affirmed GATT I believe that the total supply in
18 Mexico would be inclusive of the LNG imports.

19 MR. MAUL: All right, Larry, thank you
20 very much. It was very helpful information to
21 understand other country's views as well as our
22 own state's views.

23 Larry and Andy and Bill, thank you very
24 much for coming today, and your thoughts. We'll
25 have to pour over the material and make some sense

1 of this and try to pull it all together, but we
2 appreciate your thoughts today.

3 It's now 12:22 by my watch. I'd like to
4 shift back our lunch time a little bit, and we'll
5 reconvene back here at 1:30, to make sure you have
6 at least an hour to get out and get a bite to eat,
7 come back.

8 We'll still have the day's activity
9 concluded well before 5:00 in case you have any
10 planes you have to do. But we'll start back up in
11 here again at 1:30. Thank you very much.
12 (Off the record.)

13 MR. MAUL: It's 1:40, and we would like
14 to get out of here before 8:00 tonight, well,
15 hopefully around 4:00 today. So we'll go ahead
16 and get started again.

17 Thanks for coming back after lunch.
18 It's a nice day out there, this is one of our more
19 typical nice spring days in Sacramento. It's hard
20 to stay indoors when you have a nice day like that
21 outdoors.

22 But here we are, and we do appreciate
23 our next panel, that's up here right now. We have
24 three folks who represent the developers of
25 projects here, the offshore projects that is, in

1 California.

2 And we very much appreciate your time
3 out of your busy schedule. I know you're making
4 quite a number of presentations about your
5 projects and I know a lot of schedule conflicts,
6 and we appreciate the time you've taken to come
7 here to Sacramento to sit down with us.

8 We have three folks here, we have Steve
9 Meheen, who is the project manager for the BHP
10 Billiton proposed project at Cabrillo Port; we
11 have Paul Soanes, who is the President of Crystal
12 Energy, for the Crystal Project, the Clearwater
13 Port project; and we have Simon Bonini, the
14 President of Woodside Natural Gas, who is
15 partnering with Paul Soanes and Crystal Energy for
16 their project.

17 So with that, we very much appreciate
18 your views on the same topics of open access and
19 security of supply, and let's start off with Steve
20 Meheen.

21 MR. MEHEEN: Thank you, Dave, and we're
22 happy to be here. I'm going to go through a quick
23 slide show, I'm going to try and catch you up on
24 your time, and I'll just skip over a lot of the
25 slides, and only hit the subjects we're trying to

1 talk about today.

2 First of course, I have to do the
3 obligatory introduction to BHP Billiton, as some
4 people may not know the firm.

5 We're an Australian firm, headquartered
6 in Melbourne, Australia, but we're also a
7 multinational. We are involved in petroleum,
8 aluminum, base metals, carbon steel, diamonds, and
9 coal.

10 The little yellow dots are where we
11 operate around the world -- oops, and stainless
12 steel.

13 We're a large company, we're about a \$76
14 billion market cap company. We are a meaningful
15 participant in all of the things you can see up
16 there, we have been involved in the liquified
17 natural gas business since the early to mid-
18 1980's, we are a partner in the northwest shelf
19 project, of which Woodside, our friends here, are
20 a partner also.

21 And I will speak too much more on that.
22 The need for LNG, I'm just going to quickly skip
23 that slide and go to our chart that we always see
24 from our friends at the Energy Information
25 Administration.

1 What this shows us is that natural gas
2 decoupled itself from production and consumption
3 back around 1985 in the United States. The
4 Canadian imports have taken up the slack since.
5 And what we see going forward is a widening degree
6 of net imports, a situation of net imports that we
7 don't believe that Canadians can fill or will fill
8 it all.

9 And again, from the Energy Information
10 Administration, it's showing a decline in Canadian
11 imports and an increase in LNG imports.

12 I'm not going to argue whether these
13 lines on the graphs or chart are correct or not.
14 I think you can see trends, and they're good at
15 developing and focusing upon trends, and they're
16 not exactly factual.

17 The paradigm we're looking at, and I'll
18 use this slide to describe a few things from what
19 we've been asked to talk about in the agenda,
20 California historically has been a net natural gas
21 importer.

22 If we use the term that I've heard
23 bandied around, the nation-state of California
24 imports 85 percent of its natural gas. Importing
25 natural gas is nothing new to California.

1 What we're talking about is importing
2 LNG. In other words, a western supply, a western
3 pipeline into California. As we view that the
4 northern and the eastern pipelines may be
5 diminishing in their ability to supply the state.

6 The southern pipeline, which would be
7 Baja, California, would again be an LNG supply,
8 because Baja has no indigenous natural gas to
9 export.

10 So what are we talking about that's
11 important to an LNG developer? For us, with an
12 offshore project, we're talking about our
13 pipeline, the flange of that pipeline, crossing
14 the boundaries, the sovereign boundaries of the
15 state of California and having access to the
16 markets.

17 We believe strongly that LNG, as any
18 other natural gas supply, should not be
19 discriminated against in its access to the market.
20 There should be no discriminatory regulation passed
21 that differentiates one natural gas supply from
22 another.

23 I borrowed this from my friend David
24 Maul, and I've only borrowed it to again highlight
25 that California is a net natural gas importer.

1 44% of the natural gas came from the southwest,
2 almost 12 percent from the Rockies, our friend in
3 Canada almost 28 percent.

4 The state historically has been
5 producing less and less, and we expect it to
6 produce less in the future and not more.

7 I'm going to skip this slide, because I
8 think our Counsel General, the Honorable John
9 Olsen, flew the Australian flag well and high this
10 morning.

11 Our project, simply put, if you'll
12 excuse me, I've got to talk a little about our
13 project. Our project is to import natural gas
14 from Australia in its liquified form, to deliver
15 it to Cabrillo Port, and to supply about 800
16 million cubic feet a day, on an annual average, to
17 the California markets.

18 We intend to do this with Cabrillo Port
19 being a proprietary port to BHP Billiton. We do
20 not believe that an open access port provides any
21 advantage. In fact, we believe it provides a
22 disadvantage to the consumer.

23 We believe that a rate structure to
24 allow for open access to the port would diminish
25 our financial ability to manage our investment,

1 and our port, to the extent where our gas would
2 have to be priced higher.

3 We believe it would be a discriminatory
4 measure placed upon the LNG that is not placed
5 upon other supplies.

6 I'm going to skip that one.

7 Our port looks something like this.

8 I'll go right through that quickly, or
9 that.

10 Our port is located off Southern
11 California's Ventura County about so. And talking
12 about access, you'll see that our port is
13 connected by pipelines to the state, where it
14 joins with the public utility, Southern California
15 Gas company.

16 What we need is unfettered access to our
17 marketplace, we need a receipt point, and we need
18 firm transportation to move our gas across the
19 beach and into the local distribution and
20 transmission system. Those are also subjects of
21 PUC proceedings at the moment, so we won't go into
22 those in any detail.

23 Again, a little PR for us, some local
24 folks that like the project. These are
25 descriptions of what the project may look like.

1 I'm going to skip through that to try and conserve
2 time.

3 I think I'll skip this, except for the
4 first point. California should have a large and
5 diverse natural gas supply. It should be the
6 largest and most diversified supply that it can
7 possibly encourage to come in a free market
8 environment.

9 It should encourage investment in
10 natural gas supplies, and investment in natural
11 gas infrastructure. And it should do so by not
12 passing or considering discriminatory regulations.

13 And that's the end of my presentation.

14 MR. MAUL: Thank you, Steve, you made up
15 a lot of time on that one, that was impressive. -

16 MR. MEHEEN: We've had a very good panel
17 throughout the last day and a half, David, that
18 have covered a lot of the subjects. I don't like
19 to be duplicitous.

20 I think BHP's main point is that we
21 believe the state of California would be best
22 served by a large, open and free market of natural
23 gas supplies.

24 MR. MAUL: Mr. Boyd?

25 COMMISSIONER BOYD: I've heard this

1 presentation so many times I have no questions.

2 (laughter)

3 MR. MAUL: Harvey?

4 MR. MORRIS: I have a couple of
5 questions. First of all, you said there shouldn't
6 be discrimination against the LNG supplier, and
7 you were against open access. But you understand
8 that the interstate pipelines that supply
9 California have open access?

10 MR. MEHEEN: That's correct.

11 MR. MORRIS: Well, how would that be
12 discrimination if some type of third party access
13 was required of an LNG supplier?

14 MR. MEHEEN: An LNG facility is also
15 tied to several billion dollars of downstream
16 investment. If we cannot utilize that upstream
17 investment, to ship it to the port that we have
18 built to utilize that investment from, then we
19 have trapped our investment, and it's only causing
20 us to increase the price of our product to recoup
21 our investment.

22 If you will, Harvey, if we had to give
23 up 2/3rds of our capacity and have a mismatch with
24 our Pilbara LNG facility, we would then either
25 have to develop spot markets for the excess

1 capacity that we've naturally built in Australia,
2 or we would look at charging a higher price
3 through our port and a higher price for our
4 project to make up the investment consideration.

5 MR. MORRIS: All right. Now in between
6 open access and proprietary there's a concept
7 called managed access, where you could recoup all
8 your investment all the way upstream and
9 downstream by having the highest priority of use
10 at your facilities, but would you be against
11 having third party access if for any reason you
12 were not supplying natural gas through that
13 project?

14 MR. MEHEEN: Your question is, if we
15 cannot utilize the entirety of our project, would
16 we be opposed to others paying their fair share in
17 a throughput basis to use our project?

18 MR. MORRIS: Correct.

19 MR. MEHEEN: I think that is something
20 that we may consider. However, when we look at
21 the Deepwater Ports Act it's explicit that the
22 deep water port can be exclusive for its builder.

23 MR. MORRIS: One other question. What
24 reserves would BHP Billiton be relying on and how
25 soon would those be able to produce the natural

1 gas or LNG to supply California?

2 MR. MEHEEN: We're looking at our own
3 reserve base in Australia, and one of those that
4 we're looking at is the Pilbara LNG project, which
5 feeds off of the Scarborough natural gas field.
6 Time frame would be about 2010, give or take.

7 MR. MORRIS: Thank you.

8 MR. MAUL: Monica?

9 MS. SCHWEBS: Obviously Pilbara is just
10 in the early stages. If there's a mismatch
11 between when you think you can get a deepwater
12 port functioning and Pilbara up, does that mean
13 you would be supplying gas from elsewhere?

14 MR. MEHEEN: That's a possibility. I
15 won't rule it out.

16 COMMISSIONER BOYD: I let you get off
17 too easy, Steve. One of the concerns -- and we
18 heard it expressed today -- one of the concerns
19 that is presented to this Commission in other
20 forums about the whole LNG process is that we need
21 to look at the whole LNG process, not just at the
22 receiving end here in California.

23 And that there are environmental
24 consequences upstream that we tend to pay no
25 attention to. The implication of that statement

1 is that there is some form of environmental,
2 potential environmental damage taking place at the
3 point of origin.

4 And I just wondered if you wanted to
5 address that with respect to your project.

6 MR. MEHEEN: I think I'll address it in
7 a general statement, parallel to the Honorable
8 Consulate General's statement.

9 Australia is a western country. We have
10 long had laws that protect the environment of our
11 resources. We are a country that exports a lot of
12 our resources, whether it's iron ore, nickel, or
13 steel, petroleum, or natural gas.

14 Our environmental laws are on par and in
15 parity to those in most developed countries in the
16 world. From an Australian perspective that
17 shouldn't be a consideration that causes a lot of
18 distress to anybody.

19 MR. MAUL: Steve, you were describing
20 your project as an integrated project, yet the
21 Deepwater Port Act tends to look at offshore
22 terminals in isolation, so there's two roles that
23 you're describing.

24 One as a terminal operator versus a
25 natural gas supplier, and we initially are looking

1 at just the application of the Deepwater Port Act
2 to the terminal.

3 And looking from the terminal operator
4 perspective, you made the statement that, from an
5 integrative perspective, that is gas supplier plus
6 terminal operator, you would be damaged from open
7 access.

8 But from a terminal operator perspective
9 you might be willing to consider others using your
10 terminal in the event that you can't supply your
11 own gas to that terminal.

12 MR. MEHEEN: I think what it boils down
13 to in both cases, David, is a investment
14 consideration. Is BHP Billiton looking for 100
15 percent capacity of the terminal to support its
16 capital investment or are they looking at 70
17 percent.

18 The Deepwater Port Act, again, 1507 is
19 specific that it can be exclusive for the owners
20 use. We've gone about the permitting of the
21 facility in that nature, exclusive for the owner's
22 use.

23 When we get down to the final investment
24 considerations, does it make sense to layer up
25 capacity that we do not or cannot use? That's a

1 consideration that we have not reached a decision
2 upon yet.

3 It very well may be that yes, we would
4 say, unused capacity we would put out on an open
5 season basis. It could be that we would withhold
6 that and use it for own spot market and spot
7 trading activities and Pacific arbitrage
8 activities.

9 As you know, we are involved in the
10 northwest shelf project. We are a supplier of
11 natural gas to Korea and Japan. If there's an
12 arbitrage to develop it would be with those
13 nations. We may decide that that capacity is best
14 held for an arbitrage opportunity.

15 Those are decisions we haven't entirely
16 reached or discussed yet to have a real good
17 picture of which direction we may take.

18 MR. MAUL: You're implying or
19 postulating that the decision on open versus
20 closed access is one that the developer, terminal
21 operator, would make that decision on.

22 And yet what we're trying to explore in
23 this two day workshop is that if in the event
24 there were open access, or if there were closed
25 access, there are consequences of both actions to

1 both security supply and reliability supply and
2 other downstream consequences and possibly
3 consequences ultimately to the consumer, as far as
4 the prices they might receive.

5 We're trying to better understand those
6 in advance so that we can know whether one or the
7 other ought to be allowed.

8 MR. MEHEEN: I appreciate that, David.
9 Again, we've gone about the development of
10 Cabrillo Port with the knowledge that the
11 Deepwater Port Act allows us to use the facilities
12 exclusively.

13 And that's been our decision thus far
14 to prosecute the project.

15 MR. MAUL: Okay. Well, I don't want to
16 debate on the legal issues of it, I'll leave that
17 to my lawyers, but we're just trying to understand
18 the issues if one path versus the other path is
19 chosen.

20 MR. MEHEEN: I'll just probably say one
21 last thing in closing. There's probably a number
22 of different scenarios that will manifest
23 themselves in the future that none of us in this
24 room can foresee.

25 If BHP Billiton is using the port 100

1 percent, obviously we have an interest in running
2 an open season and allowing others to use it.

3 If we're using it in the 60 to 70
4 percentile range, I think that the attitude is
5 quite flexible about understanding what may or may
6 not take place.

7 MR. MAUL: Okay, good, Steve, thank you
8 very much for those thoughts, and that advice to
9 us.

10 Our next speaker is Paul Soanes,
11 President of Crystal Energy. And Paul has flown
12 up here today to give us his views on the Crystal
13 Clearwater Port Project, and their views on open
14 access and security supply.

15 MR. SOANES: First of all, Commissioner
16 Boyd, David, and the rest of the panel, thank you
17 very much for inviting us here today and giving us
18 an opportunity to share our thoughts with you.

19 As David mentioned, my name is Paul
20 Soanes. I'm the President of Crystal. This could
21 be somewhat confusing for you because these are
22 two Australian supply projects on my right, and
23 yet I'm the only Australian here representing a US
24 project. But I'm sure you'll work through that.

25 As I think has been very evident during

1 the last two days, the market access and supply
2 security issues are complex. I'm going to address
3 the market access issues only, and leave the
4 supply issues for Simon from Woodside, who is our
5 supply partner, to address, as he has a better
6 perspective on that than what I might.

7 With regard to market access, we feel we
8 have an approach and a solution that'll work for
9 California. And what we'd like to do today is
10 outline for you where we're headed in this point
11 in time in that regard, recognizing of course that
12 there's still a long way to go in terms of how the
13 commercial framework for the project might
14 ultimately pan out.

15 What I'd like to do in my presentation
16 is briefly lay a framework to give some context to
17 the commercial arrangements that we are
18 considering, and to do that adequately I need to
19 touch on some of the project attributes very
20 briefly.

21 And then I'm going to move through and
22 talk about some of the items that we think are
23 critical in order to have a market access
24 structure that facilitates reliable long-term low
25 cost natural gas supply into California.

1 And then I'm going to talk about our
2 approach and the model that we're proposing, and
3 what we see as the benefits of that model.

4 To start with, though, I'm going to just
5 very briefly touch upon a couple of points that
6 have been raised over the last two days.

7 The first one is, all the information we
8 see indicates that natural gas supply into
9 California and the US is very much in decline and
10 there needs to be a new natural gas supply found
11 for this region and this continent.

12 As you look to natural gas supply
13 alternatives, Asia has an abundant supply of
14 natural gas that can come to California by way of
15 LNG, and is an obvious supplier.

16 There's been some talk over the last two
17 days about California getting price gouged, and I
18 know there was some unfortunate activity in the
19 early 2000's.

20 But if you look at where California is
21 today, it's worth noting that the price of gas in
22 California is at a discount to Henry Hub, which
23 really reflects that California at present has a
24 very diversified natural gas supply which LNG will
25 only further augment and improve.

1 As you look to bring LNG to California,
2 in our view locating these facilities offshore is
3 a sensible approach for a whole variety of
4 reasons, including the fact that it preserves the
5 coastal resources of the state as well as it
6 separates the facility from the public,k which is
7 a common sense approach.

8 Just moving very briefly to our project,
9 we are located offshore, 12 and a half miles off
10 Ventura County. Our project has a number of
11 unique attributes that affect the way that we view
12 its commercialization.

13 The most pronounced of this is that
14 we're looking to maximize the use of existing
15 infrastructure by using platform grays which
16 already exist out in Santa Barbara channel.l

17 That means we're going to have a lower
18 capital cost than competing projects, and also
19 means that we'll have a lower environmental
20 impact. And then, because of the way we designed
21 the project, we haven't included inventory or LNG
22 storage in our project, which further augments the
23 cost base of the project and makes it more
24 competitive.

25 And then, my final point is that, when

1 you look at LNG projects proposed on the West
2 Coast, it's worth noting that, through our
3 relationship with Woodside we're the only proposed
4 LNG project on the entire West Coast that has a
5 proven LNG operator.

6 Moving to the question at hand, which is
7 market access. There are a couple of key
8 attributes to a successful market access
9 commercial approach.

10 The first one is low cost, and to the
11 extent your costs are low you can offer your
12 customers more flexibility, you can grow with the
13 market and meet demand as needed, and you can
14 provide a low cost option for consumers.

15 Crystal certainly can do that with
16 Clearwater Port. Our project also has a very fast
17 time period of construction. Within 18-20 months
18 of getting our permits we can be up in operation,
19 which means we can have cheaper gas to California
20 quicker, which obviously we feel is a great
21 advantage to the state.

22 And then finally, the approach that
23 we're taking with regard to commercialization of
24 our project is that we intend to be an independent
25 terminal service provider.

1 We're not tapped into any supply source,
2 we're not developing the project in order to
3 monetize supply that we have under development
4 elsewhere in the world.

5 We're going to try to contract with the
6 most price competitive and the most reliable
7 supplies that we can find in the Pacific Basin.
8 So, in essence we're going to be a tolling
9 facility. We will not be taking title of the LNG
10 or of the natural gas that get processed through
11 our facility.

12 Moving directly to the question of
13 market access, I think as we sit and consider
14 exactly how to design a market access system,
15 there are a couple of considerations that really
16 need to be borne in mind.

17 The first is that market access isn't
18 about, in my mind, what the terminal access rules
19 are, it's about what the access rules are to get
20 to the end market itself.

21 And Steve mentioned this point earlier
22 on, but what's critical for LNG supply to be a
23 reliable and long-term supply to California is
24 that the LNG projects have firm and reliable
25 access to the SoCal system, and they have fair and

1 reasonable system rights.

2 And in this regard I know the CEC is
3 currently evaluating this, but gas balancing and
4 access of storage and other systems on the SoCal
5 system are very critical, as well as the way cost
6 upgrades for the system get allocated to the
7 various projects.

8 And in that regard Crystal, as well as
9 the other proponents, have all indicated that they
10 will be more than happy to pay their share of
11 those costs. We want to be sure that those costs
12 are allocatable on a displacement basis as opposed
13 to expanding the already very efficient and
14 reliable SoCal system.

15 As you all know, California has a unique
16 gasification requirement. That means that, as you
17 look for supply to come to California on a long-
18 term basis that supply is going to need to be
19 purposely developed for California to meet those
20 specifications.

21 That's a massive upstream investment
22 compared to the cost of the receiving terminal.
23 Clearly, the cost of that supply will be reduced
24 to the extent that the infrastructure that's being
25 developed is more efficiently used.

1 In other words, once the capital is
2 spent it's all about the volume that you can put
3 through the facility and the timeframe that you
4 have commitments that go towards amortizing those
5 costs and making the supply more competitive.

6 The other issue with LNG supply to
7 California is that it's going to be dedicated to
8 California. Right now there are very limited off-
9 system rights from the SoCal system. So once the
10 LNG supply comes to California and is delivered
11 into California, it's only staying in California.

12 The molecules will be used in
13 California. That has to increase supply security,
14 and in our view that will have a dampening effect
15 on the price of natural gas from the California
16 market, simply through very basic demand and
17 supply models.

18 The final point I want to make is that,
19 as you're looking to California's security and gas
20 supply future, clearly natural gas delivered
21 directly into California by way of LNG is going to
22 be more secure than supply that might come through
23 other states or other regions.

24 Simply because it's coming directly into
25 the market as opposed to coming through other

1 avenues to get to the market.

2 Moving ahead to the model that Crystal
3 is proposing, as I said earlier on, we intend to
4 be a non-discriminatory terminal service provider.
5 We're going to be, in essence, a tolling facility.
6 We're going to provide customers, be they LNG
7 suppliers or actual gas market customers with the
8 ability to bring LNG to our facility.

9 We'll then convert it to natural gas and
10 re-deliver that product for them into the SoCal
11 system.

12 One of the benefits of this approach is
13 that it allows gas customers and gas suppliers to
14 have bilateral agreements and to work directly
15 with one another, cutting out middle men and
16 improving efficiency.

17 As you look to the approach that we're
18 going to take, we are intending to put in place a
19 commercial arrangement with a foundation customer
20 to underpin the financing of our project and its
21 commercial viability.

22 We think a long-term capacity to move
23 into the project will result in lower overall
24 infrastructure costs, both on the supply side, the
25 shipping side, and on the terminal side, which

1 ultimately will lead to a lower cost of natural
2 gas supply into California.

3 Our belief is that the foundation
4 customer will probably need to take between 60
5 percent -- sorry, greater than 60 percent of our
6 terminal capacity, on a go forward basis. And
7 we'd like to get a 20 to 25 year time commitment
8 to the capacity from that supplier, which we think
9 will ultimately lead to increased supply security
10 for California.

11 We would prefer our foundation customer
12 to be an LNG supplier, and Woodside's a great
13 example of a customer that fits that around. You
14 really want an organization that has the necessary
15 gas reserves and inclination to be a long-term
16 supplier to the region to be your foundation
17 customer.

18 Contracts are great, from a financing
19 perspective, but at the end of the day, when
20 you're foundation customer has invested \$8 billion
21 upstream to supply California you know that
22 they're always going to be there because the size
23 of their investment on the upstream side far
24 outweighs the size of their commitment to you on
25 the downstream side, which keeps the whole process

1 moving.

2 We intend to reserve the remaining
3 capacity in the terminal that's not allocated to
4 the foundation customer for use by other market
5 participants or other LNG suppliers. In essence,
6 the way we're trying to structure our commercial
7 arrangements is that we're going to have capacity
8 release provisions in our terminal services
9 agreement.

10 So either the customer nominates to use
11 the capacity that they've reserved, or else they
12 lose it, and then it gets reallocated out to
13 market participants who may want to bring supply
14 to California and can use the unused capacity
15 that's being released by a foundation customer or
16 other customers.

17 And in this regard I think Crystal is a
18 little bit differentiated from some of the other
19 proposers. Our economic model here is we're
20 looking to make our financial return from the
21 terminal itself and from use of the terminal.

22 If the terminal is not being used and if
23 it's not processing gas then we're not maximizing
24 the value of our investment, so we are motivated
25 financially to make sure the capacity is fully

1 utilized on a go forward basis.

2 We think there are a number of benefits
3 of the type of tolling model that we're proposing.
4 One is that it increases gas on gas competition.
5 When you have a low cost terminal that's
6 contracted with a low cost supply to come through
7 it's terminal you're providing a low cost supply
8 to California which increases the gas on gas
9 competition in the region.

10 We think the approach we have will
11 increase gas supply security, as ultimately the
12 tolling approach we're taking will prefer the most
13 competitive LNG supply projects. We're not
14 captive to a single supply project.

15 All potential suppliers will have access
16 to the market, not just those who are developing a
17 proprietary terminal.

18 The approach that we are proposing
19 allows the gas customers to contract directly with
20 the LNG suppliers. That has to enhance
21 contractual flexibility and it's going to
22 eliminate middle men and ultimately drive cost out
23 of the equation, which is to the benefit of the
24 consumer.

25 As an infrastructure owner we will not

1 take title to either the LNG or the gas, which
2 should mitigate some of the market power concerns
3 that have been raised with regard to LNG.

4 As I mentioned earlier, as an
5 infrastructure owner we are financially
6 incentivised to maximize the throughput and
7 utilization of our facility, so there's no value
8 in us trying to hold back capacity. We make money
9 by selling capacity and having the capacity
10 utilized.

11 We feel this approach will ensure the
12 most competitive supply projects and the most
13 competitive terminal projects developed in the
14 region.

15 Those are my comments.

16 MR. MAUL: Good. Paul, thank you very
17 much. Questions?

18 COMMISSIONER BOYD: Uh, no, just a
19 comment. I'm glad you raised the issue of market
20 power in that, as you can see from the previous
21 discussion that's something we're extremely
22 sensitive to in this state.

23 So I appreciate your consideration of
24 our consideration on that point, because as all of
25 you recognize, under the Deepwater Port Act our

1 Governor does play a role. This agency has to
2 make recommendations to the Governor and/or also
3 suggestions for conditions of approval.

4 So that's one of the reasons why the
5 broad scope of this two day approach here to try
6 to understand all the aspects, so --. Just a
7 passing comment. Thanks.

8 MR. MAUL: Harvey?

9 MR. MORRIS: A few questions. You have
10 a contract with a major capacity holder, and then
11 are you going to have an open season for the
12 remainder of the capacity, or are you going to
13 just have capacity contracts you're just going to
14 individually negotiate with others?

15 MR. SOANES: We've been following an
16 approach where we've been talking to market
17 participants and LNG suppliers in the Pacific
18 Basin who have indicated in supplying LNG to
19 California or market participants who have
20 indicated interest in buying LNG.

21 And we've been talking to all those
22 parties about them taking capacity in the
23 terminal. Our intent is to put into place a
24 foundation customer, which will securitize the
25 project, if you will, and ensure that it can be

1 constructed.

2 But in terms of other access, to the
3 extent that there are other organizations out
4 there who would like to contract for some
5 capacity, we'd be thrilled to entertain those
6 proposals.

7 MR. MORRIS: And on your use it or lose
8 it approach, you're not talking about someone
9 permanently losing the capacity, it's just short-
10 term capacity release as we would call it, like on
11 the interstate pipeline?

12 MR. SOANES: Very similar to what
13 currently exists on the interstate pipelines. So,
14 yes, we intend to put in place a long-term
15 contract with a supplier, and let's assume for
16 argument's sake that that's Woodside.

17 Then, in the unlikely event that
18 Woodside couldn't use all the capacity and it
19 didn't nominate to use all the capacity that they
20 had reserved, then we would look to release that
21 capacity to the market to ensure that the terminal
22 was fully utilized.

23 MR. MORRIS: All right, it just -- if
24 you're getting capacity payments from Woodside or
25 some other ship or capacity holder, and now you're

1 selling the capacity again, will you credit it to
2 the original holder of the capacity, or will you
3 be collecting the money for that?

4 MR. SOANES: Those details are still to
5 be worked out between Crystal and its foundation
6 customer. And my sense is that there'd be a fair
7 allocation revenues.

8 MR. MORRIS: Okay, thank you.

9 MS. SCHWEBS: Could you give us an idea
10 of what the cost difference is between your
11 proposed terminal and the BHP terminal?

12 MR. SOANES: No. I can tell you what
13 our cost is likely to be, and, you know, if Steve
14 wants to comment on their cost then he can
15 certainly do that.

16 But our capital cost for infrastructure
17 will be less than \$250 million, and that's
18 predominately because we're using existing
19 infrastructure that's in place already as our
20 base, so there's a platform there already that we
21 can re-certify as new to meet as new as built
22 today standards.

23 And the other capital cost advantage we
24 have over competing projects is that we're not
25 building storage facilities on our project, which

1 is the vast preponderance of the capital cost for
2 the LNG receiving terminal.

3 MS. SCHWEBS: Steve, you want to give us
4 a cost estimate for yours?

5 MR. MEHEEN: I think we've done that a
6 number of times in the past.

7 MS. SCHWEBS: Just trying to put it on
8 the record here.

9 MR. MEHEEN: What we published in the
10 past is about \$650 million, inclusive of what we
11 perceive the upgrades to be in the Southern
12 California Gas Company system.

13 MS. SCHWEBS: And another question, this
14 may be more appropriate for Simon, I just wondered
15 at some idea of what percentage of capacity
16 Woodside is talking about taking from Crystal and
17 what happened to the Alaskan MOU?

18 MR. SOANES: Is that for Simon, or --?

19 MS. SCHWEBS: Either one of you.

20 MR. SOANES: Why don't I have a crack at
21 it, because I know that Simon will comment if he
22 feels that I haven't answered it in a manner
23 consistent with his understanding.

24 We're still working through the details
25 with Woodside as to exactly how much capacity they

1 may or may not reserve in the terminal on a go
2 forward basis. And we're trying to structure
3 those arrangements to allow Alaska to also use
4 some of that capacity in the terminal.

5 I think the press releases that Woodside
6 and Crystal have jointly made in the past talk
7 about Woodside taking around 80 percent of our
8 capacity.

9 MR. MAUL: I might note that yesterday
10 Semptra announced that it is withdrawing its
11 support for the Alaskan gas and severing its
12 relationship with the Alaskan gas port
13 authorities, so there might be some excess
14 capacity out of Alaska that you might be
15 interested in.

16 Just a quick question here. Paul, you
17 have described your project much in the same terms
18 that you might describe an interstate pipeline
19 project where you would be the pipeline owner, or
20 in this case you're the terminal owner.

21 You would contract with customers for
22 the use of that terminal, they would reserve
23 capacity. And then the customer who reserved
24 capacity might also be the same customer who
25 actually buys the gas through somebody else, say

1 Woodside or somebody else, anywhere else in the
2 world.

3 And it would be a bilateral agreement
4 between the natural gas supplier, the natural gas
5 customer, and they'd also pay you a fee to use the
6 terminal.

7 Is that a correct characterization of
8 how you would describe your terminal?

9 MR. SOANES: Yes, it is.

10 MR. MAUL: Okay. And you said that that
11 process would maximize the throughput on the
12 project. And if I understand it correctly, the
13 way the pipelines are worked, and also the way
14 that natural gas private storage facilities at
15 work in California have a very similar
16 arrangement.

17 The party that contract the capacity can
18 choose to use or not use that capacity. So once
19 you receive your fee for the capacity reservation
20 charge then, and you've received your money, all
21 that guarantees is that there is a transfer of
22 money from the person who reserves the capacity
23 and they have a right to have that capacity
24 available to them, but it's their choice to use
25 that capacity.

1 So in fact, what we've found in natural
2 gas storage facilities is that some parties that
3 actually reserve capacity in natural gas storage
4 projects have then chosen not to use that
5 capacity.

6 Would you have any terms or conditions
7 in your terminal agreements that would require the
8 use of the capacity once it's been reserved?

9 MR. SOANES: I can see where you're
10 going. I think LNG is a little bit different to
11 gas pipelines and storage. There are a number of
12 LNG terminal service agreement models out there at
13 present.

14 If you look at Lake Charles, for
15 example, which has contracted all of its capacity
16 to British Gas, under that agreement if British
17 Gas doesn't nominate to use the capacity of
18 certain windows, that capacity gets released and
19 is made available to the market.

20 I used to work for CMS, and I've seen
21 that in operation a number of times during their
22 contractual arrangements with British Gas at Lake
23 Charles.

24 We would intend to have similar types of
25 capacity release provisions in our terminal

1 service agreements. If a capacity is not being
2 used we want to find a way for it to be used, and
3 that's to the benefit of both the terminal owner
4 as well as the capacity subscriber.

5 But there would be some fairly detailed
6 provisions and procedures that would need to be
7 operational to work through that exactly. But
8 yes, we intend for that capacity that's not being
9 used to be used more efficiently if that's the
10 case.

11 MR. MAUL: Well, like Harvey I also have
12 some interest in that particular subject, so if we
13 can get more details we'd appreciate it.

14 MR. SOANES: Certainly.

15 MR. MAUL: Okay, Paul, thank you very
16 much. there may be some questions that we have of
17 Simon, or come back to the whole group, so we
18 encourage you to stay engaged here.

19 Our next speaker is Simon Bonini, who's
20 the President of Woodside Natural Gas here in the
21 US. And Simon?

22 MR. BONINI: Thank you, Dave. I'd like
23 to thank the CEC for the opportunity to contribute
24 to the hearing. I want to start my comments by
25 telling you a little bit about who Woodside is,

1 what we do, and why we're here.

2 Woodside is not a household name in
3 California. Woodside is Australia's largest
4 independent exploration and production company.
5 We celebrated 50 years of existence last year, and
6 we're 51 this year.

7 Most importantly, I think, for this
8 group, we have a proven track record as an
9 operator of LNG plants and shipper of natural gas.
10 We produce 12 million tons per annum of LNG from
11 Australia's only currently producing LNG facility.

12 We have 16 years of experience producing
13 and shipping LNG. We have made over 1,700
14 deliveries without incident. We serve Japan and
15 Korea under very long-term contracts. We've also
16 made occasional sales to France, the US, Spain,
17 Belgium, and a number of other countries. And in
18 2002 we won a 25 year supply contract to China,
19 their first ever.

20 We are the premier LNG producer in the
21 Pacific Basin, and a trusted and reliable name in
22 LNG.

23 The activity that I run, Woodside
24 Natural Gas, is a subsidiary of Woodside Energy
25 Limited. We have been established to improve

1 natural gas supplies, specifically to California.

2 We're base din Los Angeles, and we have
3 an agreement with Crystal Energy to see if we can
4 help them develop Clearwater Port. You've just
5 hear about the key features of that project and I
6 hope will endorse what Paul has said in that
7 regard.

8 We believe that this project and
9 Cabrillo Port meet a broad range, as we see them,
10 of California's needs, but ultimately we're not
11 the judges of that, that's up to others to decide
12 whether they believe these projects meet your
13 needs.

14 I want to say something about safety.
15 This is not a safety conference, it's not the
16 content of it, but it really is in this industry
17 and certainly for Woodside our top priority. I'm
18 not speaking about it directly today, although
19 safety performance is very heavily linked to
20 reliability and environmental performance.

21 These are all areas that our company
22 holds in the highest regard. These core values of
23 safety, environmental protection, lead to our
24 maintenance training procedures and our company
25 culture.

1 You cannot have reliability without the
2 best environmental and safety performance. The
3 three go together and are intertwined in a way
4 that they can't be separated. It stands to
5 reason, unless you've got very high safety and
6 maintenance controls and procedures, you can't
7 have reliability.

8 Those aspects all work together. The
9 last two days have been very interesting as
10 various speakers have run through just about the
11 gamut, all different facets of the LNG business
12 worldwide, and I want to simplify things briefly
13 and bring it back to what I believe this is about.

14 It's about us meeting your needs. We
15 want to supply you with natural gas. We don't
16 want to make a quick sale. The LNG business is a
17 very long-term business, and it is at heart a
18 relationship business.

19 Buyers in this market in California
20 think of a one year contract as being a long-term
21 contract. For us a one decade contract is a
22 short-term contract. We want to have the
23 opportunity to supply you gas for the next 20 to
24 30 years, not for the next year or five years.

25 With the investments that we make we

1 have to be able to supply you with the product
2 that you want to buy for 20 to 30 years. And the
3 only way that I can do that is if I meet your
4 needs with regard to reliability and price.

5 We have to do that, otherwise the trade
6 is not going to work. And crucially, for this
7 market, that the supply is easy for you.

8 I think it's quite right that the forum
9 is looking at all these issues surrounding LNG.
10 It's a very important decision. However, from the
11 consumers perspective, it's just another gas
12 supply, and it's one I think, one of the speakers
13 has shown, it's one of 14 or so choices you have
14 just in natural gas.

15 And natural gas is just another subset
16 of all the other energy choices you have. I'm not
17 competing, I think this pitch has been shown of
18 competing against Russia or Indonesia or other
19 exporters.

20 Once we actually talk to the market in
21 California, I don't see that we're competing with
22 Indonesia and Russia. I'm competing with San
23 Juan, the Rockies, Gulf producers, and ultimately
24 oil and other forms of energy.

25 If I don't have a better proposal for

1 the customer then people like Jim Harrigan just
2 aren't going to buy the product. That's the
3 bottom line of where we are in the US.

4 And it's up to us in the industry to
5 make LNG work for you, the consumers. Joe Desmond
6 raised the fundamental issue of how does
7 California ensure that Californians benefit from
8 LNG, if it is indeed imported to California.

9 We'd answer that in two statements.
10 California, like the rest of the US, has a natural
11 gas supply problem, as we see it. You've got
12 supplies short and falling, demand is strong and
13 rising.

14 We see that we can offer LNG as a supply
15 option, one supply option, to California, and it
16 will be competitive on all dimensions with your
17 other choices.

18 And just by increasing supply to the
19 state your net economic gains will be enormous as
20 the gas price falls in this market. And some work
21 has been done, I think it was shown to this group
22 yesterday, in that regard.

23 We've heard a lot of views, data,
24 concepts, and some have spoken about international
25 spheres, market power, negotiating leverage,

1 moving between buyers and sellers in the Pacific
2 Basin or between projects.

3 We see, in this market, we have no
4 negotiating leverage. We don't have any
5 negotiating leverage with the state of California
6 or with the US. You have a highly diversified,
7 highly competitive energy market, where gas on gas
8 competition rules.

9 We want the opportunity to compete for
10 that business, and to show you how we can beat
11 your current supply sources. If you don't see
12 that in our offer you'll be sticking with your
13 current suppliers.

14 And our capital investment, which is
15 huge in Australia, stranded. And that's our loss,
16 that's our investment. And it's not your
17 ratepayers job to pay for that or for people of
18 California to pay for that, that is the loss to
19 our financiers, our investors in Australia.

20 These we believe to be the overriding
21 issues. California economy will benefit hugely
22 from increased supply, and that will manifest
23 itself by falling market price. We mustn't lose
24 sight of this key issue as we look at the effects
25 question of regulation.

1 Let's first state, as we move to
2 regulation, we are a highly regulated industry
3 worldwide. We deal with a variety of safety,
4 environmental, technical, operational and trade
5 regulations that are local, federal,
6 international, company and industry standards.

7 The focus as I understand it of this
8 forum is not whether we are regulated, clearly we
9 are highly regulated. Here the question is one of
10 regulations or rules specifically around access to
11 terminals.

12 And what this session has reinforced for
13 me is that there eis no easy answer to be gained.
14 Each situation is quite different and unique, and
15 I've certainly learned that California has some
16 very specific issues that it needs to address that
17 are quite unlike European issues, Gulf state
18 issues, or Asia Pacific issues.

19 What I can do is offer some observations
20 for your consideration. The US gas market is
21 unique, and has peculiar characteristics which
22 make terminal access key to exporters.

23 When we sell in Japan or China we talk
24 to potential buyers who would offer us 20 year
25 take or pay contract, backed with AAA credit.

1 That's totally impossible in the current US market
2 structure.

3 Nobody buys gas on that term, we don't
4 expect anybody to buy gas on those terms. But
5 with a multi-billion dollar investment, we do need
6 to make sure that a market exists for our product.

7 In Japan and Asia that's coming from
8 that take or pay contract with the 20 year term.
9 In the US what we need is to secure reliable
10 market access via a terminal for 15 to 20 years,
11 so that we then have the opportunity to sell to
12 consumers on much shorter term bases, on the terms
13 that the choose to buy under.

14 If you look at Asia, no LNG producer
15 owns a terminal or is attempting to own the
16 terminal. We just simply don't have to do it,
17 because we're quite content selling on the long-
18 term basis under a contractual basis.

19 In the US we can't do that. That's why
20 this issue of terminal access is so important to
21 us, because this terminal access, this market
22 access, is underwriting our project.

23 The other observation I'd like to make
24 is that, until FERC lifted it's rather narrow
25 regulation of LNG terminals and it's now much

1 talked about Hackberry decision, there were no
2 proposed onshore terminals in the US anywhere.

3 And our view is that particular
4 manifestation of regulation did stifle investment.
5 We'd suggest that the proof is once it was removed
6 the US was presented with a huge variety of import
7 options, through proposed terminals.

8 We'd suggest that this is the strongest
9 evidence that LNG regulations, as they existed
10 under FERC, were wrong, stifled competition and
11 innovation.

12 If your goal is to stimulate supply, to
13 increase gas on gas competition, and drop the gas
14 price in California, then the old FERC-based
15 pipeline rules appear not to have done that.

16 Let me turn to pricing, which is really
17 a key aspect of the business for you as consumers
18 and for us as suppliers. I think some people have
19 raise,d through their presentation, the question
20 of simply why should California bother looking at
21 LNG, why not let the Gulf states bring it in and
22 it can be shipped around the US, as any other
23 commodity.

24 Our work, and I think the work of
25 others, has shown that landing gas directly into

1 California has the most dramatic downward impact
2 on your market price. But the ending up price,
3 that doesn't move as fast, or the price in the
4 Northeast.

5 But really the price that the California
6 consumers care about most is SoCal index. The
7 price that appears on their invoice is directly
8 linked to SoCal index, and that's really all they
9 care about is what are they going to get invoiced
10 for the natural gas.

11 Now it is true that landing more gas in
12 Texas should reduce natural gas prices nationwide,
13 and you'll benefit somewhat from that. But your
14 benefit is highly muted, as it is shared around
15 all the states.

16 By landing gas directly in California,
17 you're going to have the fastest, most pronounced
18 impact on natural gas prices that you can get.

19 I'll use a simple analogy. Communities
20 that live in fishing ports generally get access to
21 fresher, cheaper fish than those inland. Why?
22 Because the fishing village is suffering from a
23 heavily over-supplied market and benefits from
24 zero transportation costs to its customers,
25 especially if you take the trouble to go down the

1 jetty and buy it direct off the boat.

2 While those in land are left waiting,
3 and they hope to see a refrigerated truck, maybe
4 once a week, of fresh fish.

5 So why do we from Australia want to have
6 the highest negative impact on your prices? It's
7 because we're neighbors.

8 If we actually wanted to access those
9 higher prices ran on Henry Hub and up in New
10 England it would just cost us too much to ship it
11 there.

12 We are simply better off selling
13 directly to Californians. You are our closest
14 port of call, you have the biggest gas market, and
15 you have some very good customers here who
16 reliably buy gas every day of the year.

17 You gain when you buy directly into your
18 territory on price, and I think you gain in all
19 the strategic objectives that you're looking at in
20 terms of your decision making.

21 That's why we believe California should
22 be considering LNG instate versus out of state.
23 We believe it offers you very tangible advantages
24 that can be shown through NOG modeling and the
25 various gas price models that are out there and

1 have been developed, both in academia and in
2 various consultancy groups.

3 I'm going to move on to a topic that I
4 would tend not to cover in general but I feel I
5 have to. A number of speakers have spoken about
6 the short-term or spot market in LNG. I believe
7 we spend far too much time on this, and that the
8 term "spot" is a total misnomer in LNG.

9 Some cargos do get released from their
10 long-term commitments, but only with the agreement
11 of buyer and seller. It's a tiny, tiny proportion
12 of all LNG. It is not traded like oil or pipeline
13 gas. I don't think it ever will be.

14 The trading community, the traders, the
15 pure commodity trading people, look at LNG as
16 another commodity that they might be able to
17 trade, and they seem to be quite interested in
18 that.

19 It's not, and it won't be. I don't
20 believe a single cargo of LNG has ever been traded
21 by a true trader. This is a highly capital
22 intensive industry that needs product flowing 24
23 hours a day, 365 days a year. It's a flowing
24 business.

25 When the gas stops the cash flow stops

1 and the banks get nervous, the investors get
2 nervous, the customers get upset and the producers
3 get upset.

4 We simply cannot stop and start
5 production at will with an LNG plant. This is a
6 bread and butter industrial business, and I'd
7 encourage the CEC to look at the reality of this
8 so-called spot market and place it into context.

9 The fact is, all gas buyers in the US
10 have a portfolio of contracts, most of which, to
11 us, are short-term, i.e., far less than 15 year
12 terms.

13 Our industry in the US has to make
14 repeat sales. The day we are not there with the
15 gas is the day we lose the customer. Reliability
16 and dependability is key to our business model as
17 it is to your issues for this conference.

18 It's key to you and it's key to those in
19 Japan and Korea. We see ourselves as part of your
20 infrastructure that you depend upon. Nobody in
21 the LNG world goes to their plant or office
22 wondering who they will be selling gas to today.

23 Our customers, our financiers, our
24 investors, want to understand where the gas is
25 going to support the multi-billion dollars of

1 investment that are required to make this whole
2 trade work.

3 Like you, we dislike uncertainty. We
4 would be very happy to sign a 20 year supply deal
5 with you, and we do regularly in all other
6 locations, but that's simply not how the US gas
7 market works, and we have to accept that as a
8 supplier.

9 I'm going to pull you away from
10 terminals for a moment. To the supplier,
11 terminals are a means to an end and not an end in
12 themselves. We will work with you to find a
13 solution that works for all constituents.

14 Again, I stress, we are in business for
15 three decades. A time scale that will see a
16 number of administrations, probably a number of
17 regulatory regimes come and go.

18 We have to see a fundamental trade that
19 works on a fundamental economic level -- willing
20 buyers, willing sellers, changes in pipeline
21 access, changes in regulation, changes in
22 governments, we have to look at the fundamentals
23 of can we land gas at a price that is going to
24 work for California consumers, not this year, next
25 year, 10 years time, 20 years time, 30 years time.

1 That is the investment decision that we
2 have to take with our reserves in Australia.
3 There are no terminals without supply, there is no
4 point in building a terminal without supply. And
5 in that regard Woodside and Australia are in a
6 very strong position.

7 We operate four major projects with
8 development opportunities in Australia. Northwest
9 shelf is the backbone of our company, which has
10 reserves still of 26 TCF. We have Browse off
11 Australia's Kimberly Coast with more than 20 TCF.
12 And very important, we have a new discovery,
13 Pluto, which has three TCF, which is sitting right
14 near the northwest shelf, into the structure.

15 When you add all that up we have access
16 of expected resources just as Woodside, in various
17 consortium, to 60 TCF. That's only half of
18 Australia's natural gas reserves. That's 30 times
19 the annual natural gas consumption of California.

20 And why is this important? Because it's
21 the first step toward reliability. Reliability
22 101, abundant, accessible reserves, economically
23 producible.

24 That's why we see Japan and Chinese
25 companies buying in to our reserves. They're

1 securing their energy future, it's a strategic
2 move. It's not a negotiating leverage, it's a
3 pure strategic move. It's a way of those nations
4 securing their energy futures by buying reserves
5 in the ground.

6 Why do they do it in Australia? John
7 Olsen, the Consulate General, has covered these
8 issues. From a commercial perspective we see that
9 Australia is a stable political environment, the
10 cultural similarities, the existing trade, tax and
11 investment treaties, make commercial parties very,
12 very comfortable doing business in Australia and
13 with Australia.

14 We share many of the same values, and
15 there was an exchange earlier about that,
16 extending into things like environmental
17 regulation.

18 So reliability is the core of our
19 industry. From a consumers perspective an
20 unreliable supply is no supply at all.
21 Government, industry, power generators, and people
22 in their homes need to know that the gas is there
23 for them. if it's not there for them, in the long
24 run gas is going to be displaced.

25 Communities with unreliable gas supply

1 just don't use it. That's the reality of the gas
2 business. As an industry we have to be there for
3 you, what's more we have been for millions of
4 consumers in Japan, Korea, and soon China.

5 You want a supply of natural gas. What
6 you want is an affordable price from a reliable
7 supplier. We have the gas reserves, and the no-
8 how in the LNG business from top to bottom. We
9 have a track record as a reliable, safe supplier.

10 The Japanese counts on us in a way that
11 California probably never will have to, because
12 you have a diversity of supply choices that is not
13 open to our Asian customers. We have never let
14 our Japanese customers down, ever, not once. We
15 have always made our deliveries on schedule.

16 Ultimately we see customer satisfaction
17 as one of the keys to our survival as a company.
18 We strongly believe that we can compete for and
19 win your business over many, many years.

20 Our LNG should be just part of your
21 energy choices, we think diversity is absolutely
22 key, a portfolio that is turning all the time with
23 multiple supply choices, modern contract terms,
24 which is the way the industry in the US and
25 particularly in California is being run at the

1 moment, we think that's the smart way to do it as
2 buyers.

3 Japan, Korea, China, Taiwan, Belgium,
4 Spain, Greece, Turkey, Portugal and Italy all have
5 import facilities, and all have had very positive
6 experiences with LNG, some over many, many
7 decades, as part of their energy mix. Not as
8 their whole energy, but as part.

9 Even countries that have very good
10 pipeline access still see LNG as being part of
11 their energy mix.

12 Jim Jensen, in his comprehensive
13 presentation, mentioned that the UK started the
14 international trade in the 1960's when they found
15 indigenous reserves up in the North Sea. They got
16 out of the LNG business. the North Sea is now
17 declining. they've decided they'd like to get
18 back into LNG and are reactivating terminals now.
19 They are a repeat customer for LNG. They had a
20 period of time where they thought it was
21 appropriate, a period of time when they didn't
22 think it was appropriate, now they feel they need
23 it again and they're putting it back.

24 The worldwide experience of LNG has been
25 positive. We have many, many repeat customers.

1 We'd like California consumers to join that group.
2 As I've said, we have the know-how, the expertise,
3 and the experience to meet some of your needs
4 through natural gas from Australia.

5 Thank you for allowing me to speak.

6 MR. MAUL: Simon, thank you very much.

7 Very thoughtful. Commissioner?

8 COMMISSIONER BOYD: Where do I sign up?

9 (laughter)

10 MR. MAUL: Good salesman, huh?

11 COMMISSIONER BOYD: No questions.

12 MR. MAUL: Harvey?

13 MR. MORRIS: A couple of questions. For
14 the reserves that you referred to, that are
15 available, assuming the permitting is done, how
16 fast could that be produced and available for sale
17 in California, from the production end of things?

18 MS. SCHWEBS: And while you're at it,
19 talk about northwest shelf train five please?

20 MR. BONINI: Let's talk in sort of time
21 scales for the LNG business. We have LNG
22 production right now, total million tons per annum
23 of it. Most of that is completely committed, on a
24 long-term basis, to Asian customers who depend
25 upon it and wish that gas to keep flowing.

1 Again, going back to can you rely on it.

2 Yes. We don't have access to it, it's sold.

3 Train five is a project that's currently in
4 development. It's being actively marketed. To be
5 a buyer of LNG and to access it you have to have a
6 terminal.

7 I think the issue for California is,
8 until it's clear that California is going to
9 review the issues and come out with a position,
10 you're a potential customer, not an actual
11 customer. So we actually have a lot of interest
12 from the Asian group of existing buyers for those
13 expansions of Northwest shelf.

14 I would believe that, if California did
15 enter the market in a real way, you would get an
16 awful lot of attention from a number of projects,
17 both those on the drawing board and those that are
18 in production.

19 The issue at the moment is that there is
20 little tangible sales or purchase that could be
21 done whilst there's still uncertainty over whether
22 in fact California chooses to enter into the
23 market or not.

24 Does that, does that at least cover some
25 of it?

1 MR. MORRIS: Well, let me clarify. A
2 lot of times you can answer a question
3 hypothetically, so you don't have to assume
4 everything, you don't have to base everything
5 having been done, but assuming everything were
6 working out the way you wanted to in California or
7 wherever, with your production reserves is there a
8 ballpark time period if hypothetically the things
9 went into place that you would want to go into
10 place?

11 MR. BONINI: Yeah, hypothetically, if
12 you look at, from the date that a terminal is
13 approved, certainly for the Clearwater Project,
14 you're looking at construction times that tend to,
15 once the permits are approved and everything's in
16 place, you're looking at construction times that
17 then to be in the 24th month.

18 On the export side you're looking at
19 construction times that tend to be 36 to 40
20 months. The question is the lead-up to that large
21 investment.

22 We are currently saying for new projects
23 that the estimated startup date would be around
24 the 2011 time period.

25 However, my estimation would be that if

1 California entered the market and said they wanted
2 to buy gas, you'd get a lot of interest from
3 people that want to develop.

4 And if you look at the infrastructure
5 around the Northwest shelf that has the capability
6 of being very quickly developed, which, one of the
7 benefits of our recent Pluto discovery into an LNG
8 supply stream much, much faster than that.

9 I can't give you a date for that right
10 now, but certainly in terms of northwest shelf
11 train five and train six there are possibilities
12 there. Nothing focuses the minds of sellers more
13 than real customers.

14 MR. MORRIS: One more question. Crystal
15 Energy said that their policy would be to have the
16 "use it or lose it" for short-term leases, even if
17 somebody already is a long-term capacity holder.

18 Does Woodside have any problem with that
19 policy? It's not open access, if you're not using
20 it it would be released to someone else for short-
21 term.

22 MR. BONINI: We, yeah, we don't have a
23 problem with that. There are some details to work
24 out. If we're paying for it and we lose it we'd
25 have something to say about it being sold twice to

1 different people, but the concept of we're not
2 using a piece of infrastructure for a period of
3 time it should be available.

4 We feel, from a political viewpoint,
5 from a customer viewpoint, from the viewpoint of
6 the people of California, it would be unacceptable
7 for somebody to wish to use a piece of gas
8 infrastructure where there's LNG pipeline storage,
9 whatever it is, for a party to be prohibiting
10 that, if they're not using it.

11 So, we see that reality is that that
12 approach is something that makes sense all around.
13 There may be some commercial issues we'd want to
14 discuss around it, but the principle of it seems
15 very sensible to us.

16 MR. MORRIS: Thank you.

17 MS. SCHWEBS: Yes, another question that
18 relates to northwest shelf train five. And I
19 don't think that Paul was talking a lot about the
20 cost figures for, as everybody has been, for
21 greenfield projects, but we're talking expansion
22 capacity for northwest shelf train five.

23 And could you give us some idea of what
24 the cost differences are for expanse of capacity
25 versus greenfield project such as Pilbara?

1 MR. BONINI: Uh, I, no, I'm sorry, I
2 can't, I really don't have those to hand.

3 MS. SCHWEBS: Can you supply them for
4 the record please?

5 MR. BONINI: We could, yeah, we could do
6 that, I'm not an expert in Australian exporting,
7 that's fine.

8 MR. MEHEEN: I think, Monica, for
9 clarity, you need to understand the northwest
10 shelf is not owned solely Woodside. It's operated
11 by six different partners of which BHP Billiton is
12 an equal partner at the same percentage as
13 Woodside.

14 MS. SCHWEBS: Please feel free to answer
15 that question too.

16 MR. MEHEEN: We can supply the
17 information, I don't have that with me.

18 MR. BONINI: Maybe I should clarify on
19 the point that Steven has just raised. Most LNG
20 projects, I think all LNG projects because they
21 are such huge capital investments, involve a
22 number of partners.

23 So some of the hesitation around what's
24 at northwest shelf. We are the operator of
25 northwest shelf, but it's a group of in this case

1 six companies. I think most large LNG export
2 projects have a minimum of three companies in
3 them, sometimes states -- in many companies it's
4 state-owned participant, that's not the case in
5 Australia, it's six privately owned companies.

6 MR. MEHEEN: And specifically there's a
7 management group, Australian LNG, ALNG for short,
8 that manages and administrates the northwest shelf
9 projects on behalf of all the partners and handles
10 all the sales.

11 So you might be asking two wrong people,
12 Woodside and BHP, to comment about direct details
13 on northwest shelf.

14 MS. SCHWEBS: We do have some contacts
15 in Australia LNG, so if you want to go talk to the
16 contacts that's okay too.

17 East Timor and the Browse Basin. You
18 want to comment on that, Simon. I know that's one
19 of the sources that you mentioned. Is that
20 realistic?

21 MR. BONINI: Did I, I actually don't
22 think I mentioned the Sunrise project as a source
23 at the moment.

24 MS. SCHWEBS: Okay.

25 MR. BONINI: That is still being

1 discussed between the East Timorese and the
2 Australian government. We don't have a comment on
3 those, status of discussions right now. If you
4 actually looked at Australia, looked at Woodside's
5 portfolio and others in Australia, the Gorgon
6 Project, and the clear message is Australia has
7 huge resources of natural gas for which it has no
8 direct use and is very happy to export.

9 So if you look at what your supply
10 options are out of just Australia, it's not just
11 Woodside. We have the Sunrise Project, which is
12 sitting up near the Timorese border. We have the
13 Browse Basin, which is sitting north of Kimberley,
14 off the Australian coast, as I think part of the
15 northern territory.

16 There is the northwest shelf reserve,
17 what is now called the great northwest shelf
18 reserve off western Australia, which has our
19 discovery, as I said, the Gorgon Project there,
20 and massive, very prolific gas-producing wells
21 that are very well suited to LNG.

22 We attract a lot of industry down to
23 Australia based upon low cost gas reserves, and we
24 have so much that we really need to export it to
25 get economic value out of it. So Australia in

1 general has a number of very, very good projects
2 by a number of very competent and capable
3 participants, of which we are one.

4 MR. MAUL: Okay, Simon, thank you very
5 much for your comments, and thank you, all three
6 of you, for your openness here about the projects
7 and for your considerations for the concept of
8 open access. Thank you very much.

9 Okay, our next panel is two people
10 looking at strategies of what might happen if
11 there were an interruption in supply, and how the
12 state system might be able to accommodate that,
13 either through its pipeline system or its pipeline
14 network system.

15 And we have David Taylor, Director of
16 Gas Transmission for Southern California Gas
17 Company, and Wayne Tomlinson, Director of Market
18 and Project Analysis for El Paso Pipeline Company.

19 And while they are coming up and getting
20 set up, let me also remind anybody in the audience
21 who wishes to make a comment during the public
22 time, if you could please fill out a blue card.

23 See Mary back there, she has blue cards
24 back there, and if you fill one out we'll take any
25 public time during the Public Comment period, and

1 we do have adequate time for public comment today,
2 as we did yesterday.

3 So please see Mary and fill out a blue
4 card so we can get them in our stack here.

5 Well, David, thank you for flying up
6 here today. Hopefully the gas network system is
7 operating correctly today, and --

8 MR. TAYLOR: We're having our
9 challenges, like a lot of days.

10 MR. MAUL: Just as long as you don't use
11 your cell phone.

12 MR. TAYLOR: Actually I have a new job
13 now, so I'm not the gas system operator, like I
14 was for the last six years. I help to maintain
15 the pipelines now, and the compressor stations.

16 What I -- first of all, thank you for
17 inviting me. And what I was asked to address were
18 strategies for dealing with interruptions on our
19 system. Natural gas storage, pipeline slack
20 capacity.

21 One thing I'll note right off, slack
22 capacity, in at least the operator's definition,
23 is not so much as it is in the regulatory
24 definition. On the regulatory side it's defined
25 as sort of an annual amount of capacity in excess

1 of what your average annual supplies are.

2 From the pipeline operators viewpoint,
3 it's an excess capacity that's available on any
4 given day under any given demand/supply scenario.
5 So I will discuss it more in terms of excess
6 capacity and storage.

7 Again, I apologize, I didn't bring a
8 pointer with me -- oh, let's see, how does it
9 work. Oh, there we go, fantastic.

10 As John Dagg talked about yesterday in
11 describing the Southern California gas system,
12 there are a number of considerations that you take
13 into account when considering potential supply
14 disruptions.

15 First of all, you can see, with Southern
16 California Gas system, there's a number of receipt
17 points existing already -- Ehrenberg, Topoc,
18 Needles, Kramer Junction, we have Wheeler Ridge,
19 which is also Kern River Station, and we also have
20 Occidental Petroleum coming in here.

21 We have a number of offshore producers
22 that produce into it,, from the coast here and
23 then also up into the San Joaquin Valley.

24 With the addition of LNG, potentially,
25 to our mind they are just additional new receipt

1 points. And that's how we looked at being able to
2 accept their receipts, and how we would look at
3 operating with those receipts.

4 Of the points that we have studied,
5 there's Crystal and Woodside and BHP up here in
6 the Oxnard/Ventura area coming in to our system;
7 there is the Mitsubishi Project coming in to Long
8 Beach; there is potentially Sempra, Shell, Chevron
9 coming in somewhere down here in Mexico but
10 entering at Otay Mesa.

11 And also, potentially, some of that gas
12 also entering into our system at Ehrenberg,
13 Arizona.

14 With that said, the system is quite a
15 large system. We have that receipt point capacity
16 of just under four BCF existing today. We also
17 have quite a developed storage field system.

18 And this storage field system we use to
19 balance any differences in what supply is coming
20 in and what demand is off the system, at any given
21 day. We have storage here at Aleso Canyon, Playa
22 Del Rey, this is our largest demand center in the
23 LA Basin.

24 We also have storage up on the coast
25 here, and we also have storage up in this part of

1 the system.

2 Now, I say that because if there is a
3 shortfall, either on a planned or unplanned basis,
4 if there is a shortfall in supply to what our
5 demand is, or demand in a certain part in our
6 system, it can only be made up with storage
7 withdrawal. That's how we do it today.

8 But you would also say that our demand
9 varies all over the place on our system. It goes
10 below two BCF a day to well over five BCF a day.
11 So we're already handling quite a range of changes
12 in supply, changes in demand.

13 Now, with or without new receipt points,
14 the system requires a combination of both flowing
15 supplies coming in and storage to be able to
16 balance. We do that today. We might have four
17 days a year that storage is not utilized on our
18 system, but for the most part we have to use them
19 both.

20 On very large days, as I said, we have
21 about four BCF of receipt point capacity now but
22 our demand can exceed five. On other days, if
23 it's down below two BCF we end up having more gas
24 and need a place to put it.

25 So, that being said, no matter where

1 these supplies come in, we still will end up with
2 a requirement for a system minimum flowing supply,
3 because again we need them both, and just by
4 design of our system we also have a requirement
5 for a minimum flowing supply here at Ehrenberg.

6 That's just because we do not have, it's
7 just not designed to be able to flow gas back this
8 way on our system. We do have some ability to
9 flow gas that is in this area back into the San
10 Diego area, but not entirely, at least not under a
11 big load day.

12 So those requirements would still exist.
13 I did say that the gas system is flexible as it
14 exists today. The magnitude of supplies at any
15 one of our receipt points can vary day to day, it
16 can vary cycle to cycle. It certainly varies
17 season to season.

18 And we basically change the direction of
19 flow on our system in order to get the gas from
20 where it's coming in to where it's needed. And
21 that's happening today.

22 However, that said, it's a big system.
23 There's a time constant, a time lag if you will,
24 in order to move supplies around, to be able to
25 change the direction of supplies.

1 Another consideration is that, currently
2 the majority of supplies are out here, relatively
3 distant from our main demand sources. And what
4 that provides me as a system operator is time to
5 react, because gas systems, they're big, slow
6 beasts. they take awhile before being able to
7 change around.

8 For instance, if we have to change from
9 supplying gas this way to supplying gas this way,
10 it can take four to eight hours in order to turn
11 that system around.

12 Another point to realize is that, today
13 there is a four cycle scheduling process. I
14 believe John Dagg talked about it a little bit
15 yesterday. But for every gas day customers have
16 four opportunities to nominate what supplies they
17 want and where.

18 And from the first cycle, they can have
19 three opportunities to change that, throughout a
20 gas day. So we're already working in that type of
21 an environment.

22 That said, it's still difficult to react
23 to large changes in supply during an inter-day
24 basis. It's hard on the upstream pipes in El
25 Paso, and on the other ones, to make big changes

1 throughout the day, because things don't change
2 very quick.

3 Another consideration, I would say, from
4 the system operators viewpoint, additional supply
5 sources adds generally to reliability of the
6 system. A good example I think is the San Diego
7 area. Right now it's basically fed, 95 percent of
8 its supply comes down the Moreno Corridor here.

9 Having an additional supply at the
10 bottom basically doubles my reliability in that
11 system, and I believe we had an incident of that
12 last November, that supply down here came in very
13 handy in keeping customers on.

14 Let's see. I have two more points here
15 to consider. If we have new receipt points of the
16 magnitudes that we've been talking about, they're
17 going to be as large as our existing receipt
18 points.

19 In that vein, we have had to look at
20 them as equivalent to just another supply source,
21 like our existing interstate supplies. That said,
22 we would need constant flows, or relatively
23 uniform hourly flows, from these suppliers.

24 And the main reason for that is system
25 stability, because we have demand going up and

1 down, and if we don't have a constant supply
2 source it's more likely the system could go
3 unstable and we could lose it.

4 The other thing is it maximizes the
5 pipeline capacity coming in if they don't deliver
6 on a uniform hourly basis.

7 And then, as the LNG suppliers I heard
8 from the previous panel say, they have to be
9 reliable. They have to at least be as reliable as
10 our interstate pipeline sources. And we have yet
11 to lose an interstate pipeline source, even in a
12 force majeure event, for any significant period of
13 time.

14 So there would be a great dependence on
15 it. Okay, that said, the ability to react to
16 large gas supply interruptions depends on whether
17 the interruption is planned or unplanned. And the
18 most significant thing is what is the demand on
19 the system that day.

20 So even on an unplanned basis our
21 system's usually flexible enough that we can
22 usually react to either major changes in supply or
23 major changes in demand. But if it's a big
24 demand day it gets harder and harder to react to
25 these changes.

1 Now, on a planned basis, the loss of
2 supply can be accommodated on most scenarios.
3 Bets are off on a big demand day. If we're having
4 a five BCF day it's going to be hard to react to a
5 loss anywhere, even on a planned basis.

6 But today customers can change their
7 source of supply through the scheduling process,
8 and that has not presented a problem for us.

9 Modest changes in schedule volumes are
10 known by us in sufficiently in advance to make
11 changes inn our system, either bring on withdrawal
12 or bring supply in from other receipt points where
13 it's coming to.

14 However, if there's a lot of changes on
15 an inter-day basis, it can be difficult to
16 accommodate because of the effect on, you know,
17 the supplies are scheduled on a daily rate, and
18 halfway through the day if you cut it by a quarter
19 it's essentially like cutting it by a half for the
20 day. So it has a much bigger effect during the
21 entry day.

22 However, on a planned basis, from an LNG
23 viewpoint, I would suspect that this would be
24 typical of a ship delay due to storms or
25 something, in being able to hit a terminal, and

1 customers could then go to other sources to
2 schedule their supplies and they could have some
3 time to do that, and again if it can be handled
4 through the normal scheduling process we could
5 deal with it.

6 On an unplanned interruption, and we've
7 had quite a few of these through the years, as I
8 said, in the short run they can only be made up,
9 on our system at least, through storage
10 withdrawal.

11 A good example was, during the Carlsbad
12 rupture, not to pick on El Paso, but I was working
13 very closely with them at that time, we
14 effectively lost about 700 in supply at our
15 Ehrenberg receipt point.

16 And we were able to pick that up through
17 storage withdrawal, and without any impact on
18 customers off our system. Now, we then kind of
19 went back and said well, what would happen if we
20 then lost supply at some of these new receipt
21 points that we're talking about for the re-
22 gasified LNG?

23 And I'll go back here to my map. Let's
24 start with the Oxnard/Ventura area. From the
25 operator's viewpoint this receipt point is

1 sufficiently far away from our major load center,
2 which is here, that we feel that if we had an
3 unplanned interruption supply from whatever source
4 that we would be able to get withdrawal on
5 sufficient time to be able to get it into our
6 system. We feel that we could recover from it
7 without too much trouble.

8 Now, as we get into the other locations,
9 specifically let's talk about Long Beach here, now
10 this is delivering right into our major load
11 source, our only option there is to bring on
12 withdrawal as quickly as we can.

13 We happen to be blessed with a nice
14 little storage field, but at a high deliverability
15 storage field, at Playa Del Rey, that has proven
16 to be a very responsive type field when we need to
17 get it on quick.

18 But that would be our only option in
19 order to be able to prevent the potential of the
20 risk of curtailments. But on a big day, there's
21 no question. If we were to lose this abruptly on
22 a large day there is a risk of curtailment. So
23 reliability cannot be overstated.

24 Down here, at Otay Mesa, it's
25 essentially the same issue. It's delivering right

1 in to the demand center here in San Diego, and
2 depending on the magnitude of the supply and the
3 magnitude of demand, this supply may be feeding
4 all the demand, or it actually may be feeding all
5 the way through.

6 A loss would mean that we would have to
7 turn around and be able to flow this way and catch
8 the bottom here before it was lost. Now, that's
9 not altogether something that hasn't happened to
10 us, or we haven't been tested on. We did have
11 that test last November. And we were able to
12 recover from it.

13 Our strategy for being able to protect
14 against something like that is to ensure that we
15 have sufficient pack in our Blythe system here,
16 which, since we can't really get storage all the
17 way back here -- pack is our battery if you will.

18 But our normal operation is to do just
19 that, we usually have quite a bit of pack in the
20 system, and this whole system is about a third of
21 our entire system inventory that we work with
22 so --.

23 The other thing I would say is, this
24 particular receipt point really increases
25 reliability in most other instances. And a loss

1 of supply here on an unplanned basis is exactly
2 the same as a loss of supply here on an unplanned
3 basis.

4 And so far I only know of one instance
5 of which I was involved with here, where we did
6 have this loss of supply here, at least
7 temporarily, but we were able to recover from it.
8 But there's no question, there is a risk of
9 curtailment here due to the lack of reaction time,
10 or less reaction time, because it's feeding the
11 demand center.

12 The last point, I'd say, is that
13 supplies here at Ehrenberg, Arizona should be no
14 different, if lost would be no different than a
15 loss at El Paso today, on that effect. Basically
16 we would still have the Blythe minimum that we
17 would have to have, and if it all went away we
18 would be facing curtailment, certainly in the
19 Imperial Valley area.

20 That said, however, if El Paso is
21 successful in getting their 1903 line in here,
22 this supply plus the existing El Paso southern
23 system, plus the 1903 line, we'd essentially have
24 three potential sources that one could go to in an
25 emergency in order to be able to pick up that

1 supply.

2 So in summary here, I would say in
3 general more sources of supply do more to enhance
4 the system than to put it at risk. And mostly
5 because there's the opportunity to go to other
6 points to get your supply.

7 And on a planned basis loss of supply it
8 can be handled under most circumstances. On the
9 unplanned loss I would say that the loss from any
10 receipt point, on a big day, is going to give us
11 trouble.

12 However, the reaction is more difficult
13 at points delivering at Long Beach, Otay, and
14 Ehrenberg, just due to less time or just due to
15 the requirement that we have a system minimum. So
16 I can't stress enough high reliability from any
17 new receipt point would be required in order to
18 make it an integral part of our system.

19 MR. MAUL: Good, David, that was a very
20 detailed presentation of the system. Questions?

21 COMMISSIONER BOYD: David, you mentioned
22 the role of storage in reliability and therefore
23 operation of the system. And I bit my tongue
24 yesterday to ask about the role of storage because
25 it was on today's agenda.

1 But those of us who have watched the gas
2 system for several years, and also in writing and
3 issuing our Integrated Energy Policy Report in
4 2003 we pointed out the importance of storage, our
5 concerns about storage, the positive attributes of
6 maybe looking for more storage in California.

7 I'm just wondering if your company has,
8 is looking at the possibility of increasing
9 storage or has any plans to increase storage, or
10 whether that possibility even exists for you?

11 MR. TAYLOR: I can only talk from the, I
12 can't talk from the economics business side of it,
13 whether or not we would, that we've looked at it
14 and that it would be cost-effective to do.

15 I'd say from the physical side there are
16 opportunities to increase storage, both off the
17 SoCal system, and I believe we've also looked at
18 other, smaller fields within Southern California.

19 What little I know of the economics of
20 developing brand new storage, what kills you is
21 the cushion gas investment that you have to make
22 in a storage field, which is generally
23 approximately half the inventory is chewed up, and
24 at today's prices it's, from what I understand,
25 does not make it economic to develop a greenfield

1 one.

2 However, our system, we have a number of
3 incremental storage potential cases or
4 possibilities off of our system. I think we've
5 put them out there in one or two of the latest
6 BCPA filings at least. So there are opportunities
7 out there.

8 MR. MORRIS: Just looking into the
9 future, if LNG supply gas comes into California
10 and someday going into other states as well, and
11 there needs to be a quick changeover to get the
12 directional flow back to California, have you
13 looked into those long-term issues as far as
14 flexibility if the systems get reconfigured to go
15 from west to east and we need to go back from east
16 to west, and how quickly that could be done?

17 MR. TAYLOR: I haven't looked from a
18 regional perspective, but certainly off our
19 system, since we're moving it around all the time.
20 I will say this, that from what I know of the
21 Transwestern system, they flow both directions,
22 depending on times of the year, between the
23 Anadarko and the San Juan Basin.

24 I believe the El Paso system can do that
25 as well. But I think that would be something that

1 would have to be looked at. I would almost bet
2 that -- right now we see seasonal changes in
3 supply, right now, which causes shifts in how
4 supplies come in to our system.

5 For instance, Rocky Mountain supplies
6 are generally quite high in the summertime, and
7 they go to quite low values in the wintertime.
8 Same thing with what we're physically getting in
9 from what's left of the Canadian supplies.

10 So, I would say, from the operator's
11 viewpoint, from a relatively long-term basis, they
12 could do that. However, what I can't really
13 address is whether there is sufficient excess or
14 available spot market supplies that would be
15 available that they could then physically turn
16 their system around in time to support a short-
17 term interruption.

18 But again I'd say that, with a multitude
19 of different supply sources it's very unlikely
20 that they would all go away at one time. And so,
21 as the operator we would be looking at the loss of
22 maybe one or two at any one time, and anything
23 greater than that would generally happen over a
24 much longer period of time.

25 MR. MORRIS: Thank you.

1 MS. SCHWEBS: Just a quick question
2 about the potential for the Mexican LNG terminals.
3 It's my understanding that there's no storage
4 anywhere along that system, so -- and I see Wayne
5 is nodding his head already.

6 This suggests that it may have to be El
7 Paso that comes in with supply quickly if that
8 supply source is lost. Has anybody given thought
9 as to whether that's something that can be done
10 and done the planning for that?

11 MR. TAYLOR: Off of El Paso you mean,
12 or --?

13 MS. SCHWEBS: Well, I guess, Wayne was
14 nodding his head, really this is a SoCal Gas
15 question that would have to cover that --

16 MR. TAYLOR: Yeah, I mean, the way we
17 would look at it, you'd have to look at the type
18 of failure that you might see. That would be hard
19 to react to. If the failure was between the
20 receiving terminal and the pipeline that connects
21 with the Baja Norte mainline, then that would wipe
22 out that supply of gas, that's correct.

23 And then our only alternative would be
24 to go to El Paso and try to get some immediate
25 term supplies of gas, and then work with our gas

1 acquisition group, who is charged with trying to
2 balance our eastern part of our system, for
3 getting gas scheduled there.

4 However, if the loss was between the
5 Baja-Norte -- maybe I can show it here, here we
6 go, I'll just go to my map here -- okay, so if the
7 loss was here we would only have, our only option
8 would be to go up here and try to find supply,
9 either 1903, which I assume will be in by then, or
10 off the El Paso system.

11 If the loss was here there would still
12 be that route to go here and bring it in at
13 Ehrenberg. Or if the loss was somewhere here,
14 again, we could just bring it out. So the loss of
15 this line would take them out, or their receiving
16 terminal alone.

17 And what we do now, at least on an
18 emergency basis, we work with the system operator
19 under the very short term to try to get supplies
20 in at a point through their flexibility in their
21 system, and that's why we work very closely with
22 them.

23 Does that answer the question?

24 MS. SCHWEBS: It does. And just one
25 other question. Do you do this kind of emergency

1 curtailment planning routinely, for instance at
2 the interstates, is that something we should be
3 looking at potentially if LNG terminals come on,
4 an emergency supply plan?

5 MR. TAYLOR: Well, yes, we don't do an
6 emergency supply plan. What we tend to work with,
7 and we work with all the upstream operators as
8 well as the California ISO, on information
9 sharing, and trying to get enough heads up on
10 these instances to be able to react to them,
11 either within our own system or from the upstream
12 operator.

13 What we, short of that, it's up to
14 customers to be able to get their supplies to be
15 able to meet their demand, short of, in SoCal's
16 case at least, the gas acquisition group, who I do
17 have the authority to ask to try to supplement our
18 supplies, either to meet this Blythe minimum or to
19 meet our system minimum. So --.

20 But there's no formal, that I'm aware,
21 of supply, emergency supply planning.

22 MS. SCHWEBS: So no planning for the
23 non-core backup?

24 MR. TAYLOR: Not that I'm aware of, no.

25 MS. SCHWEBS: Okay. That's it.

1 MR. MAUL: Okay. Dave, you described
2 the LNG receipt points as providing additional
3 benefits through increased supply sources, but you
4 also describe some increased risk. In your view,
5 is the value of the additional benefit greater or
6 lesser than the value of the potential risk, or
7 the cost of the risk?

8 MR. TAYLOR: As a system operator I
9 think the risk is pretty small. I think the value
10 from reliability of supply and reliability to be
11 able to balance the system on a day to day basis
12 is greatly enhanced by being able to have more
13 supply sources. Absolutely.

14 MR. MAUL: Good. Thank you. Okay,
15 David, thank you very much for your comments here.

16 Our next speaker is Wayne Tomlinson, who
17 has come out from Colorado -- did I get that
18 right, Wayne? Colorado?

19 MR. TOMLINSON: I live in Colorado
20 Springs.

21 MR. MAUL: That's right, I got the right
22 town.

23 MR. TOMLINSON: It's a little cold
24 there, compared to here. I used to be used to
25 this warm temperature, being from El Paso, Texas.

1 But I think Monday our high was 55 degrees, and my
2 heater was still on. So that's, that's not good
3 news.

4 MR. MAUL: So our gas prices spike
5 because you guys, not because of us really?

6 MR. TOMLINSON: Well, I've been up here
7 the last couple of days, I wonder if some of the
8 gas stayed up in the Rockies instead of coming
9 across to the west, but that should have happened.

10 MR. MAUL: Okay, well, welcome.

11 MR. TOMLINSON: I want to thank
12 Commissioner Boyd and Dave, Harvey and Monica for
13 inviting the El Paso Corporation here. I don't
14 think we've been to active out here for a number
15 of years, and I think it's the management's
16 thought that we now need to be active if we want
17 to be part of California, it's very important to
18 El Paso natural gas pipeline.

19 And before I get into the slides I've
20 got some observations from the different
21 presenters of the last two days. One of them is
22 that El Paso does welcome LNG. It's our belief,
23 looking at the macro model in North America, that
24 there is an imbalance between demand and supply.

25 It's hard for me to believe that there's

1 only four individuals in the United States that
2 are experts, that are reservoir engineers, that
3 actually know what the production is.

4 El Paso, as you know, we about 50,000
5 miles of pipe throughout the United States. We
6 have tremendously huge pipes, ANR and Tennessee
7 that go out into the Gulf. We look at that
8 quarterly, monthly as far as the supplies, to see
9 what is happening in the deep and shallow Gulf in
10 Texas.

11 We also look in Permian on the El Paso
12 side, El Paso natural gas pipeline. Also in San
13 Juan and the Rocky Mountains, CIG out of the Rocky
14 Mountains. We have an extensive expansion at
15 Cheyenne Plains that just went in service January
16 of this year.

17 We do look at the supply. But we also
18 notice that it's not balanced like it was before.
19 And, not getting outside my presentation, because
20 I'm not a supply expert, but i do have reservoir
21 engineers working for me.

22 Canada is not in balance by any stretch
23 any more like they were as far as exports to the
24 United States. And that's causing one of the
25 biggest problems you're seeing, the balance in the

1 United States visavis the demand.

2 Another key thing that I've observed the
3 last two days is I think a very key for
4 California, and many other people in the energy
5 chain, is optionality. And in that optionality
6 LNG is part of that.

7 The suppliers want that optionality.
8 and many of them have that today. And I'll get in
9 to that when I get into the presentation.

10 I think the LDC's like Dave want the
11 optionality. That's why he wants the LNG. And
12 it's going to be a very important component to his
13 portfolio, a very diversified portfolio. Which
14 California, compared to the states or other LDC's
15 throughout the United States, California enjoys a
16 very diversified portfolio today. And it doesn't
17 mean it can't be enriched.

18 And also I believe the LNG shippers
19 would like to have optionality. And part of that
20 optionality may be no contracts.

21 I'd also like to make the comment that,
22 when LNG actually really hits the United States,
23 Canada and Mexico -- and over time, not something
24 in the current time frame, I'm looking at 2010,
25 2012, 2014, when you get at least 8 B's coming

1 onshore or more, you're starting to look more like
2 a global environment of oil.

3 And I can remember back about 1998,
4 being at a PIRE (sp) conference. And PIRE, at
5 that time, had forecasted that China's economy was
6 going to take off. And the price of oil was
7 going to take off.

8 Not the realm that we're seeing today,
9 or the last three or four months, but it was
10 going to be up to possibly the \$40 realm.

11 Well, it didn't happen in 1999, 2000,
12 China -- they were just a little premature in
13 their forecast. But China did take off, and my
14 comment about this is if we connect to LNG,
15 depending on the percentage that you get into the
16 United States, you have to be cognizant of the
17 fact that the same thing could happen to LNG as
18 oil.

19 I don't think it's anything we should be
20 afraid of, I think it's something we should plan
21 for, make sure you have the optionality to do
22 other things, because at certain times commodity
23 prices are going to rise and then at certain times
24 they're going to decrease.

25 Then I can remember another, about a

1 year and a half ago, I won't say who asked me this
2 question, but it was from California, and they
3 said they didn't understand why pipelines,
4 interstate pipelines, can't expand without
5 contracts, when they have these LNG facilities
6 begging at the door of California, and are willing
7 to put in anywhere from \$250 million facilities up
8 to a billion dollar facilities, without contracts.

9 Well, I was a little dumbfounded. I
10 mean, I've worked for the pipeline quite a few
11 years -- don't let the gray hair fool you -- and
12 there's no way that an interstate pipeline is
13 going to get a seven seas certificate from the
14 FERC without contracts.

15 The second part of that, looking at
16 Cheyenne Plains, when we put that in place this
17 year -- and of course El Paso's balance sheet is
18 not as strong as it used to be -- but that
19 financing would not have been done unless we had
20 those contracts.

21 So I started thinking about why would
22 someone put a facility in without contracts?
23 Optionality. If they don't have to have contracts
24 -- they'd have to have deep pockets, they'd have to
25 finance it basically themselves or they'd have

1 other ways on the balance sheet to finance it --
2 it allows them that they don't have to serve that
3 direct market. It gives them the optionality to
4 go somewhere else.

5 If there's no contracts there's no
6 guarantee. I'm not saying there's no reliability,
7 they can have contracts after the facility is put
8 into place, but it does give them an option,
9 because they don't have a contract to serve, that
10 they can go to the highest market.

11 I also just heard something, and I'm not
12 trying to be light of this, but my Dad used to say
13 be careful when someone says I'm going to be your
14 best friend and I've got a bargain for you.

15 LNG, I think, is an option for
16 California. I think you need the infrastructure
17 in place. But I would be careful, though, since
18 you don't have contracts, that there's a good
19 chance that that gas is going to go somewhere
20 else.

21 I believe that if someone wants to come
22 into market and they would say that they're going
23 to bring your prices down, and we still want to
24 bring you the commodity, well, if I'm a
25 businessman, what I learned in business school a

1 long time ago, I'm trying to get the highest price
2 I can get.

3 Yes, I want to make relationships, Yes,
4 I want to continue, if I can have a long-term
5 contract I'm willing to discount certain things
6 for it, but if I don't have a contract I'm going
7 to take the down turn and have no upside? I don't
8 think that's really the case.

9 A little dose of pipeline now. Another
10 thing that I think we need to look at is, in North
11 America, that macro market, there's a lot of
12 optionality now for the suppliers.

13 That wasn't the case back in '78, when
14 it went from sell to resell to transportation.
15 The pipelines would only expand when they were
16 trying to attach new supplies.

17 It's not the case throughout the whole
18 United States, meaning that there's some pockets,
19 like in the Northeast, that's pretty tight, like
20 the Boston market.

21 But if you look down in the Gulf Coast,
22 it's over-piped. If you look at Texas, it's over-
23 piped. If you look at the West, it's over-priced.
24 There's a great infrastructure there.

25 The suppliers love that, it gives them

1 optional. You look at someone like Permian,
2 one of those producers, that allows them to go to
3 California or Arizona when there's a higher price.

4 The basin of choice on our pipeline is
5 San Juan. The new contracts at SoCal will tell
6 you that. And the same thing with PG&E.

7 Another good example of this is Canada.
8 As we've seen the last three years in January,
9 when the prices in the East Coast increase, the
10 gases from Canada goes east. If the prices
11 increase on the west, then the gas from Canada
12 will go west, going down through the United States
13 on the west side.

14 Just having the infrastructure built to
15 California does not guarantee that the supply will
16 be available. Contracts in the appropriate price
17 for supply, and I'm talking about any
18 infrastructure, will allow you then the
19 connectivity and allow you to have that supply
20 instate.

21 The last thing I would like to make a
22 comment on is that we cannot lose sight of the
23 other states in the Southwest. I think Arizona is
24 very important to California. It generates a lot
25 of electricity and it transmits a lot of that

1 electricity to the state of California.

2 Now, in this presentation I have, I'll
3 go through it pretty quickly, I think a number of
4 people have seen a number of these slides and
5 there's a few new ones in it.

6 First I'll show the El Paso natural gas
7 system, and then I'll go through some of the
8 behaviors of the market, and then I'll go through
9 some conclusions on market behaviors.

10 And this is what I have to put in every
11 one of my presentations because they never know
12 what I might say. Okay, this is El Paso's system.
13 It's, as everybody always says, it's a very
14 complex system.

15 It's got a north system and a south
16 system. It's connected directly into three basins
17 -- Anadarko, Permian and San Juan. It's also
18 connected to the Rocky Mountains with Trans
19 Colorado coming down.

20 I didn't put in Cheyenne Plains, but we
21 can connect Rocky Mountain Gas through Cheyenne,
22 it's just a little bit more difficult and it's
23 going to have to go through another third party
24 pipeline, get into Permian, and move it west on
25 our south system.

1 The north system, as probably most
2 people know, is full, it runs flat out basically.
3 But the south system is running about 50 percent
4 load factor.

5 This is El Paso system again, and I just
6 want to show some different things on this. Down
7 in Mexico you'll notice we'll have the Sonoran
8 Pipeline. That's a joint venture that we're
9 trying to get all the contracts and permitting.

10 The thought is that we have an extra
11 BCF, possibly a BCF of gas supply, to hit our
12 south system. This would be a little different
13 than something I heard yesterday from another
14 pipeline, we look at this as a supply source for
15 the existing shippers on the El Paso system.

16 We are not looking at this as being
17 something we will have to expand to for new
18 contracts on El Paso south system.

19 The next thing that's a little different
20 on this, it does have Line 1903, and you can see
21 that by Ehrenberg in the dotted line that goes up
22 towards Mojave. And that system, there's a good
23 possibility it's going to flow both ways.

24 I didn't say this earlier, I was
25 supposed to really, but El Paso's west flow,

1 sustainable capacity on it's system, is
2 approximately 4,500 a day.

3 That's an average for the 12 months, you
4 can see it deviates a little bit in the May-June-
5 July-August-September time frame. It's a pretty
6 good load on El Paso system. This is including
7 off system deliveries.

8 Since I said the north system was pretty
9 much full, I thought I'd show you some daily pulls
10 on El Paso system, on the south system. And you
11 can see, from the year 2001 it's decreased on the
12 south system as far as the throughput.

13 But if you actually did some linear
14 regression, and went from the beginning timeframe
15 to the end, you'd notice there's a slight tendency
16 going up over time. So it has increased over
17 time.

18 And in other slides I'll show you, this
19 increase is basically due to the Mexican loads,
20 the power generation, mainly in Arizona, and the
21 LDC increases over time.

22 Now some of the slides you've seen, and
23 I'll go through them quickly. This is a monthly
24 average day, going back way in time, through
25 current, comparing the five pipelines to

1 California when all five pipelines are in place,
2 to the capacity, which is defined by CEC.

3] And you can see that the gap between the
4 yellow line and the blue top shaded area is the
5 capacity that's available. But this might not be
6 a fair comparison, because it's been on an average
7 day per month.

8 So we re-did this and actually put
9 dailies. And you can see the volatility there for
10 the daily. I don't have as much data for going
11 back in time, but going from 1998 through '05 time
12 frame, and looking at the comparison between the
13 yellow and the blue, you can see that there is a
14 lot of capacity still available, even on daily
15 takes.

16 So this is showing your peaks. It
17 doesn't show peak hourlys. To go into California
18 that is probably not as important as what we see
19 in Arizona with the electric power generators and
20 what they take on an hourly basis.

21 So we thought one more way to look at
22 this thing. Let's take our strategic forecast,
23 which goes out to 2009, we ought to increase the
24 capacity of California, saying that there's been
25 certain people that want to expand into

1 California.

2 And then I believe starting in 2006,
3 something like that, we increased 500 a day, that
4 would be in interstate pipeline. And then about
5 2008 we thought about LNG, another 500, would be
6 hitting California.

7 Even absent that you'll have a BCF plus
8 of excess capacity to the state. And I think
9 yesterday someone didn't believe that there was
10 excess capacity to the state, but I think this
11 shows that there is.

12 Here's a new one I don't think most
13 people have seen. I have to apologize, I don't
14 think the green line is totally accurate. If
15 anything it should be around 8.3 during this whole
16 time frame.

17 But that green line is the physical
18 capacity that we're looking in to the state of
19 California. And the yellow line is supposed to
20 depict all the contracts in California over time.

21 To be fair, what we did was we adjusted
22 the contracts for SoCal on Transwestern to show
23 the step down the latter part of this year. We
24 also took PG&E's contract with GTN and rolled that
25 over, which I understand is what they plan to do

1 on GTN.

2 And we took the contracts of PG&E on El
3 Paso, the future contract, put it in there, and
4 had them stepped down, and we did also the same
5 thing with SoCal.

6 Then what you see is the normal
7 progression of step downs, it really is the non-
8 core contracts that we have within California.
9 And if you maintain the green line at 8.3 you're
10 looking at three BCF plus a day that is un-
11 contracted for in the state of California.

12 A little different slide here, I think
13 this will interest a lot of people. This goes way
14 back in time, to 1980. At that time California's
15 throughput on El Paso's system equated to about 80
16 percent of the load on El Paso.

17 And over time you can see that that has
18 changed. During 2004 it's flip flopped, 52
19 percent now is ACE and Mexico combined, basically,
20 and California is 48 percent.

21 Then I wanted to show it to you a little
22 bit differently. Instead of on a percentage basis
23 show you the magnitude of the volumes. I also
24 included in here, which might not be totally fair,
25 but the green lines above the bars are off system.

1 So we have off system throughput. The
2 yellow, red, and blue really is denoting the
3 westward flows, basically. And if you look at
4 2004, and then go back over time, we're not
5 hitting the maximum that we've seen on a
6 throughput basis for the system, but it's getting
7 pretty close.

8 And I'll go through this pretty quickly.
9 What I wanted to depict was the behavior of each
10 one of the pipelines over time. It's showing the
11 daily throughput levels for each one of the
12 pipelines.

13 First one is GTN. You can see that,
14 prior to 2003, pretty much base load off GTN
15 during that time frame. And then something
16 happened in 2003. Matter of fact, in the month of
17 January they went down to a load on one day of 300
18 a day. They averaged during the entire time frame
19 almost 1,700 a day.

20 And if you, I didn't bring the other
21 graph here, but it's almost a perfect correlation
22 with Transco pricing number six, in the northeast,
23 that their prices skyrocketed that day. And
24 again, gas out of Canada went to the eastern
25 United States and didn't come to California.

1 And that's replicated itself the last
2 three winters.

3 This is Transwestern. I can say that El
4 Paso and Transwestern look very similar. The line
5 that you see that's going vertical, that's the
6 Kern River expansion that was May of 2003.

7 You can see that after that time frame
8 that the throughput on Transwestern decreased.
9 And even over that entire time frame it's pretty
10 volatile. I think that's what Dave has said also.

11 Here's Kern River. You can see their
12 expansion. You can the increase of the throughput
13 on their system. Notice that it's not as much a
14 baseload after that expansion went in place, and
15 that's probably two fold.

16 One, there was not enough supply in the
17 Rocky Mountains to fill that pipe. Second thing
18 is what we say in the Rockies is that, when
19 there's weather, the supply stays in the Rockies.
20 And that's what's happened initially.

21 What we're seeing currently is that the
22 supply is increasing remarkably. If it wasn't for
23 Cheyenne Plains it'd probably be pretty tight at
24 this point.

25 And the best for last, of course, El

1 Paso. You can see it has the downward trajectory
2 that Transwestern had, except when it goes past
3 the expansion of Kern it's pretty much the same
4 line but can get pretty volatile.

5 Okay, I want to show the behavior of
6 other markets. And this is LNG. If you would go
7 back to 2004 and look at the load factors of LNG,
8 my understanding is that it was about 71 percent
9 through the United States.

10 And this accumulates for all four LNG
11 facilities. And it looks pretty volatile at that
12 point. But that's not really true for all of
13 them.

14 Code Point is very volatile. Elba
15 Island is also very volatile. Lake Charles is
16 very volatile but not Everett. But the reason for
17 this is because it has storage facility, and if
18 you augment an LNG facility with some storage then
19 you can do some other things with it.

20 I wanted to end with a few conclusions.
21 Looking at the GTN pipe, I don't think there's
22 going to be a change any time soon with the supply
23 in Canada. I think you're going to see Canada's
24 supply is going to change price.

25 And that gives them the optionality,

1 just like I said before. And everyone on the
2 energy chain would like to have optionality.

3 Kern River does have long-term
4 contracts, but the supply in the Rocky Mountains
5 does want to go east. Cheyenne Plains is one
6 example of that. You also have Intrega (sp) in
7 Cannes (sp) pipeline that they're trying to get a
8 certificate for.

9 Up to similar the magnitude of 1.3 a
10 day. I can tell you there is other producers that
11 are also looking to go east.

12 I can also say there are some other
13 producers that want the optionality to go east and
14 west, and they'll do that with kind of a hedge,
15 which is not a bad way to do things, that they can
16 go to Opall (sp) for 12 cents and leave it at the
17 header there and let someone transport it to you
18 in California or Nevada, or they can pay 20 cents
19 to get it to you at Kansas.

20 So everybody's looking for their
21 opportunity, the best opportunity they can get.
22 Transwestern just expanded last month east, 375 a
23 day out of San Juan.

24 The producers out of San Juan were
25 pretty landlocked, meaning that they couldn't do

1 too much going east. This gives them another
2 avenue, better optionality, that those producers
3 want.

4 There's another thing that
5 Transwestern's trying to do with their pipeline,
6 because they want optionality. They're going to
7 have their new contract with SoCal, I think they
8 also see that the step down's on their system, so
9 they're forced to find other avenues to make sure
10 they get their revenue requirement.

11 They're looking at expanding, as
12 everybody knows, into Phoenix, at about 500 a day.
13 And they have announced that there out there for
14 an open season.

15 EPNG, as you can see, the Mexican
16 markets have increased. We will lose some of
17 those Mexican markets if LNG goes to Baja. That's
18 about 200 to 220 a day. We do have some markets
19 east, but I can tell you those markets east are
20 not as viable as the western markets because
21 they're competing in the Permian market area to go
22 to Texas or to go off system going up to the east
23 coast.

24 So that is not a premium market per se.
25 We do have a number of power plants in Arizona.

1 By 2008 we're looking at the possibility of 1.5
2 BCF of un-contracted capacity for those power
3 plants in Arizona.

4 El Paso wants optionality also. And
5 what we are looking at is for California, not just
6 to El Paso's pipe, it could be to anybody's pipe,
7 Kern River, GTN, Transwestern, there's no
8 guarantee for whatever infrastructure that you
9 have in that it's going to hit day in and day out.

10 And I think what you have to do is have
11 as much optionality as possible. And one of your
12 cheapest hedges is to pay for transportation to
13 augment with something else if the infrastructure
14 does not work.

15 Either you have to do that or you have
16 to increase storage, something in the
17 infrastructure, to ensure that you have an
18 abundance of natural gas. And whenever you need
19 it and call on it, it's there.

20 And that's all I have to say.

21 MR. MAUL: Okay, Wayne, good, thank you
22 very much. And thanks for coming to California,
23 we hope we're going to see you a little more often
24 here in the future. Questions, Commissioner Boyd?

25 COMMISSIONER BOYD: No questions.

1 MR. MAUL: Harvey?

2 MR. MORRIS: Yes, I have a couple of
3 questions. First of all, in terms of getting this
4 optionality on the pipelines in North America, a
5 number of speakers have said that there really is
6 less production, more production, in North
7 America.

8 Do you have any views on that?

9 MR. TOMLINSON: I don't totally disagree
10 with that. But there is some exploration being
11 performed in the United States. There's a lot of
12 old basins. But there is prolific drilling at
13 this point because of the prices.

14 And if you look at San Juan, although
15 it's on the downturn, because of the increase of
16 the drilling rigs in that area it's pretty small
17 decrease.

18 Permian's pretty much flat. Rocky
19 Mountain's at an increase. And where you really
20 see the decreases is in the shallow Gulf, I mean,
21 it's tremendous. It's very similar to what you
22 see in Canada.

23 You don't see a lot of new exploration
24 in the United States, there is some. But there is
25 a tremendous amount of drilling at this point.

1 So I think we're on a treadmill. I
2 think that you do need other infrastructure in
3 place. But even with that infrastructure in
4 place, LNG let's say, I think you want to make
5 sure you hedge your bets. Because it might not be
6 there.

7 MR. MORRIS: And that leads to my next
8 question. When you were talking about the
9 decreasing contracts on the El Paso system, for
10 example, that was assuming that a contract
11 terminates, for example of a market, or it isn't
12 re-contracted.

13 MR. TOMLINSON: That's right.

14 MR. MORRIS: What will happen, what
15 would El Paso do for capacity that -- there's
16 pipeline steel that comes to California, but there
17 is not a firm contract. And let's say someone
18 doesn't sign up for that in re-contracting.

19 MR. TOMLINSON: Okay.

20 MR. MORRIS: What would your pipeline do
21 in that circumstance? Would there still be
22 interruptible transportation that could be flowing
23 regularly, 100 percent of the time whenever it's
24 called on?

25 MR. TOMLINSON: Well, one thing that we

1 can do, if it's not contracted to California we
2 can contract it to somebody else. And if it's not
3 contracted then it's available on an IT basis
4 specifically at the maximum rates to California or
5 whatever is deemed valuable, but I don't do that
6 with the company, as far as the rate structure,
7 any more.

8 But there's a good chance it could be
9 sold upstream. In times other things could happen
10 with that pipe. It might not always be there,
11 let's put it that way.

12 MR. MORRIS: Okay, thank you.

13 MR. MAUL: Well, Wayne, thank you very
14 much, that was a very helpful presentation,
15 especially the two of them back to back looking at
16 the system, and how the system -- the pipe, the
17 network, the storage, and how the state pipe can
18 react to LNG, and if it comes in or it doesn't
19 come in and what happens to the supply structure,
20 so --.

21 You've provided some very good
22 guidelines for us, so thank you very much.

23 All right, our last two speakers for
24 today. We have Keith Lesnick, who is going to
25 switch tables with us here, from behind and being

1 a part of our government panel to being a
2 presenter.

3 We've asked Keith to come out and not
4 only sit with us and learn with us, but also to
5 provide guidance to us. Keith is the Director of
6 the Deepwater Port Projects at the US Maritime
7 Administration.

8 There's a lot of issues dealing with the
9 Deepwater Port Act that have not been fully
10 fleshed out yet, and we're seeking guidance as
11 fast as we can get it to understand these issues
12 and apply it to California, apply it to the
13 decisions that our Governor may need to make
14 consistent with all the federal law.

15 So Keith, we're glad you were able to
16 fly out here, despite all the troubles you had
17 getting here, and we're glad you can finally give
18 your say to us.

19 MR. LESWICK: Oh, it's always a pleasure
20 to be in California, it really is.

21 Before I begin, I'd like to point out
22 that we at the Department of Transportation take
23 this process -- I think anybody can say this but I
24 really mean this because we are so immersed in it
25 right now -- very, very seriously.

1 And we understand the issues facing the
2 state of California. We're aware of them and
3 we're waiting to receive your information in order
4 to process an application as you proceed.

5 Like I said, this is a relatively new
6 program for the department, and --. The Deepwater
7 Port Act has been around since 1974. It was
8 originally developed to deal with the importation
9 of oil. When it was first passed the department
10 set up a program to issue licenses and they
11 thought there was going to be great interest.

12 Exactly two applications were filed, and
13 two licenses were granted, and one facility was
14 built, which is Lute (sp), which is off the coast
15 of Louisiana that is still operating today, which
16 is an oil receiving facility.

17 We granted our first license at the
18 department on December 27th of 2002, which besides
19 making for a really merry christmas at my house
20 was sort of a situation where we had to sort of
21 make it up as we went along.

22 And we have learned since then, and have
23 gained a body of knowledge. We have so far issued
24 three licenses, one facility is in operation,
25 that's Energy Bridge. There are seven pending

1 licenses and at least another four that are out
2 there that are being prepared for submission.

3 When we started this program we all
4 assumed that we would probably get eight
5 applications total, so there's much more interest
6 than what we initially thought.

7 The Act was amended in 2002 by the
8 Marine Transportation Securities Act to include
9 LNG facilities, as you know, and at that time the
10 Coast Guard was still within the Department of
11 Transportation.

12 Since that point they have been moved
13 over to Homeland Security. We still process, we
14 still work in tandem with them to process the
15 applications.

16 And essentially what happens is the
17 Coast Guard handles the initial review of the
18 application for completeness, they handle the
19 environmental aspects, the environmental review,
20 they've clearly, if there's a license granted they
21 set up the safety regulations and the operating
22 manual.

23 But the Department of Transportation and
24 the Maritime Administration develops the record of
25 decision for the license and the licensee. And

1 that Act gives the Maritime Administration, since
2 that power's been delegated by the Secretary of
3 Transportation, pretty much a lot of latitude in
4 granting and revoking a license if he or she
5 should choose to do so.

6 We have essentially, the Act was set up
7 to streamline the process. We have less than a
8 year, essentially, to write up a record of
9 decision and to grant the license.

10 There is a review process. The last 90
11 days are really when we, at the Maritime
12 Administration, become extremely actively
13 involved, because that's the deadline for the
14 final public hearing, and within 45 days after the
15 final public hearing that's when the Governor of
16 the adjacent coastal state can either approve,
17 deny the license, or approve it with conditions.

18 These are the participating federal
19 agencies that also review the applications when
20 they come in. Obviously the US Department of
21 Commerce, which is essentially NOAA, NOAA
22 Fisheries, and EPA have the most -- we interact
23 with them the most during this process, obviously.

24 They have 26 days to review the
25 application for completeness. What we've done,

1 because what was happening at the beginning was
2 people were coming and their handing in incomplete
3 applications, and so we've developed a process
4 where we have a process to stop the clock, and we
5 ask that the application provide complete, you
6 know, whatever information they need to provide to
7 complete their application.

8 What we try to do to avoid that is we do
9 a lot of work with the applicant beforehand so
10 they understand what the application is and so
11 they come in with a complete document. But if
12 they don't we stop the clock.

13 Here in California I think, as you know,
14 the clock is stopped on both of the applications
15 here. It's because your environmental review
16 process doesn't match up with the federal review
17 process, and so to get that to mesh we've stopped
18 the clock on these two and we're waiting for you
19 to complete your -- and that's the simplest way to
20 explain it, we're waiting for you to complete your
21 review process.

22 So there is sort of. one of the previous
23 panelists had said that the Coast Guard had put
24 the applications in the Gulf on hold, but not
25 essentially, that may just be a matter of

1 semantics.

2 In my mind they are not on hold, we're
3 continuing to process, we're just waiting for
4 further information, and it's mostly information
5 that has to do with the environmental assessments.

6 Here are our factors that we must
7 consider when we are issuing a license. We have
8 to consider the national interest. The Maritime
9 Administration is extremely concerned with the
10 citizenship, who owns the facility, but we're also
11 concerned with their economic viability.

12 And it's not just, yes, oil and gas
13 companies have a lot of money, but who actually is
14 going to guarantee that facility. And when we
15 talk about that we talk about the requirements of
16 de-commissioning, because when the life of the
17 facility is over with we want to be able to go
18 back to someone in 30 or 40 years and say, okay,
19 here's your bill for de-commissioning. And so
20 we're very strict about that, as we are with all
21 the other things.

22 But, below, here, you see the timeline.
23 And it's a very quick timeline, and it seems like
24 they all come up around Christmas time, I don't
25 know why.

1 These are our ongoing activities. One
2 of our main things is to receive and process
3 departmental comments. And when we get those
4 comments we act on them. And if NOAA has a
5 concern about one of the technologies or something
6 in the application, with something that's in the
7 environmental assessment, we act on that and we
8 seek to rectify it.

9 And I can go in and tell you that with
10 all the applicants, we are very careful about
11 their ability to do proper monitoring of the
12 environment and mitigation. Especially in the
13 Gulf, and with regard to any fish habitats.

14 For us at the department, the benefits
15 of deepwater ports are transportation related.
16 Here in California you're very, very sensitive to
17 port congestion. Obviously, your ports are the
18 busiest ports in the United States.

19 There's a reason why Congress passed a
20 law that allowed these facilities to be built off
21 the coast. It's to keep these large tankers that
22 keep getting bigger all the time from coming in to
23 crowded ports and having to maneuver through
24 ports.

25 So there's an efficiency and a security

1 aspect to this that we recognize and that we
2 appreciate in that that's one of the reasons why
3 the department was delegated the responsibility of
4 issuing the license.

5 Obviously we expect that we'll be
6 getting more applications over the next several
7 years because of the increase in imports.

8 And here's, right now, where the
9 application's are. As I said, there's three
10 approve, one is operating, Energy Bridge, there
11 are seven pending, and there are probably four
12 proposed at the moment, one off the coast of New
13 York, another off the coast of Boston, one off the
14 coast of Florida, and another one, I think there
15 is consideration of one off the coast of
16 California.

17 Questions?

18 COMMISSIONER BOYD: I actually don't
19 have any questions. I just wanted to thank Keith,
20 I know he had a tough time getting here and
21 participating with us.

22 I for one have learned a lot about this
23 process during the last few years, and just
24 appreciate the work of your agency.

25 MR. MORRIS: No, uh, since you're

1 sitting at our table we decided we would not ask
2 you any hard questions.

3 MR. LESWICK: If that's the case, I do
4 want to say that we are very sensitive to the
5 needs of the states. Right now we are working
6 with the Governor of Louisiana to try to satisfy
7 her concerns in terms of the applications that are
8 before us that are adjacent to the state of
9 Louisiana.

10 And without going into specifics here,
11 if she's not satisfied then these facilities are
12 not going to be built. And there's no way around
13 that. So we're working with them to see if
14 there's a possibility of working that out, if
15 there isn't, there isn't.

16 But we're not going to -- this isn't the
17 federal government trying to ram anything down
18 anybody's throat, this is us working in tandem
19 with all of you to make sure that we're doing
20 something that is acceptable.

21 MR. MAUL: Well, Keith, as the state of
22 California said twice before in Congress, we view
23 the relationship we have between the federal and
24 state agencies here, the US Coast Guard, MARAD,
25 and the state of California and its agencies,

1 working on projects about the deepwater ports is
2 being a model of how the state and federal
3 governments can work together in a positive,
4 cooperative way to get a project done in a timely
5 manner for the benefit of both the project
6 developers and the citizens as well as protecting
7 the environment, so --.

8 It's a model that we like. We're very
9 supportive. We appreciate the approach of the US
10 Coast Guard and MARAD in joining with California
11 and doing these projects under the guidance of the
12 Deepwater Port Act, so we're very appreciative of
13 that.

14 In the context of this particular
15 workshop, we're looking for some more guidance on
16 how to interpret that one section that deals with
17 open access or closed access. We're trying to
18 interpret how much latitude there is in the
19 interpretation of those provisions, what your
20 experience has been so far, how it has been
21 applied or not been applied in the past?

22 MR. LESWICK: Explain some more in terms
23 of open access to --?

24 MR. MAUL: Well, there's a provision in
25 the Deepwater Port Act that actually was sort of

1 the genesis of this whole workshop which allows
2 the developer to either operate the facility as a
3 closed facility or as an open facility.

4 We're trying to better understand who
5 makes the decision and how that law applies, and
6 is there regulations that provide better guidance
7 and clarification of it?

8 MR. LESWICK: Okay, well, the Act
9 provides, we would interpret this as saying the
10 applicant would have some latitude. However, when
11 your Governor, if they were to approve an
12 application, one of the conditions of the license
13 would be whatever you felt comfortable with in
14 terms of dealing with that particular issue.

15 And that is, some of them might be deal
16 breakers but I, you have the right to say "we want
17 to approve it with this condition." And whatever
18 that condition, in terms of access, would be.
19 That would have to be in that license. And we
20 would enforce it that way.

21 That's what we intend to do. Anything,
22 like I said earlier in my presentation, the
23 Maritime Administrator has a lot of latitude.
24 They can pull a license if the facility is not
25 being operated in the way that is prescribed in

1 the license.

2 MR. MAUL: I know we've sought some
3 guidance from your office in the past regarding
4 emergency planning and preparedness under the
5 Deepwater Port Act. Your basic guidance to us was
6 consider anything that's reasonable, so we're
7 trying to keep ourselves to a reasonable request
8 here.

9 So we'll follow that general guidance,
10 but we appreciate at least what clarification you
11 have for us today.

12 MR. LESWICK: Right, and through the
13 process you're going to be, I mean, I would assume
14 that there's nothing that's going to stop you from
15 talking to the applicant, so you can -- these
16 things are negotiable.

17 And that's something -- if the Governor
18 wants these things to be done, that's the
19 condition the Governor has, that's fine.

20 COMMISSIONER BOYD: Keith, it's good for
21 you to see the faces of some of the people who
22 have to advise the Governor, and who may have to
23 deal with the consequences of some of that advice
24 in the future, so --.

25 MR. LESWICK: That's okay, it's only

1 paper, it's all right.

2 MR. MAUL: Keith, thank you very much
3 for coming out here, and obviously we have more
4 conversations to have on this and other topics,
5 so --.

6 MR. LESWICK: Okay.

7 MR. MAUL: Well, our last scheduled
8 speaker today before we get to the Public Comment
9 period today is Jim Jensen. And we've actually
10 asked Jim to take on probably the hardest role of
11 the entire two day conference.

12 That is to come back and provide some
13 wrapup for us, and his observations and insights
14 over the last couple of days, what he's heard,
15 what we've heard, and to make some sense out of
16 all this.

17 And more importantly is to help key up
18 the major issues that we need address and grapple
19 with internally as we talk about all the material
20 we've gotten in the last two days. Sort through
21 the various issues and decide how to go forward on
22 them.

23 I've asked Jim to provide some guidance,
24 or to kind of tee them up so eventually we don't
25 miss any key issues as we make our lists here of

1 what we have to come up with.

2 MR. JENSEN: Commissioner Boyd, members
3 of the panel, I think the Commission is to be
4 highly commended for the activities of the last
5 two days, because I think it's been very
6 comprehensive, very penetrating, and I think
7 everybody's learned a lot from it.

8 I feel honored that I've been asked to
9 try to wrap up the subject. Very clearly, we've
10 covered a lot of ground. And if I tried to
11 summarize what we said I would very quickly get
12 bogged down and confused rather than clarify.

13 So I'm going to try to do what one of my
14 college professors used to say, after doing a very
15 complicated engineering problem, "step back, close
16 one eye, see what makes sense."

17 So I'm going to try to focus on what I
18 think the two underlying issues of the conference
19 have really been. That is the security of supply
20 issue and the open access issue. That's
21 underlined a lot of what's gone on and I'm going
22 to try to address both of those.

23 Security of supply. Obviously one of
24 the questions is, as California moves from
25 reliance on US sources of gas to sources that

1 originate in foreign countries, there's a risk
2 there that should concern.

3 And one of the things one might choose
4 to do is what I would call is the chosen
5 instruments supply approach. We heard a very
6 eloquent presentation from Counsel Olsen about the
7 beauties of Australia.

8 And I fully agree, Australia is a great
9 country, it's very reliable, and it's a very good
10 place to supply gas to California.

11 Let me suggest, however, that the chosen
12 instruments approach has been done differently in
13 the world in general. And I think the different
14 approach is something that you ought to look at
15 and be careful about.

16 And I'd look to Japan and the way Japan
17 went about a very, very strong concern about
18 security of supply originally, because they were
19 kind of the pioneers of building the LNG business.
20 And they were very, very sensitive to supply
21 security.

22 The Japanese were in the old world of
23 country to country contracts, and if a particular
24 contract went down they were in deep trouble.
25 Their approach essentially was to diversify

1 supply, to have lots of suppliers so that in
2 effect you did not get stuck if anything went
3 wrong.

4 And in a sense, in the LNG business, to
5 put in a new greenfield train is a very expensive
6 operation, as distinct from putting in an
7 expansion train.

8 The Japanese very deliberately, as they
9 moved around, did not necessarily buy from the
10 cheapest source if it was an expansion of
11 something that existed. They deliberately brought
12 new supplier into the equation so that they had a
13 lot of different people to choose from.

14 And interestingly enough , Qatar was
15 looking for a long time to put an LNG project
16 together, and they were doing it at the time of
17 the first Gulf war. And everybody looked at Qatar
18 and said how could you ever conceive of buying LNG
19 from a place like the Middle East.

20 The Japanese at some point looked at it
21 and they concluded that it was worth doing. And
22 so the Japanese were one of the lead contracts
23 that got Qatar gas going.

24 Now, that approach is essentially a
25 diversified set of suppliers, and the industry now

1 has a diversified set of suppliers. There are a
2 lot of different people out there, you don't have
3 to rely on one or the other.

4 And furthermore, the flexibility that
5 the industry has built, the short-term trading
6 amount is not large, but it enables the system to
7 sort of deal with upsets.

8 The fact, when Tokyo Electric shut down
9 17 nuclear plants, and at that point the Koreans
10 were in the spot market sort of playing games and
11 it fouled up the Koreans and it fouled up the LNG
12 markets worldwide and it fouled up the oil
13 markets.

14 The fact that the system was able to
15 respond very quickly, and LNG came in from as far
16 away as Trinidad, from Nigeria, from Algeria, in
17 order to offset it says that some of the old risks
18 of concentration in one country are going.

19 And I think that's the direction the
20 industry is going to be able to offset such supply
21 risks, and let's say I'd encourage you to be more
22 relaxed, perhaps, about the issue, in looking at
23 that.

24 I guess a second part of the security
25 and supply issue is what we were hearing this

1 afternoon from the pipelines. What happens if
2 something goes wrong, how do yo adjust to
3 problems. And I was very impressed by the
4 pipeline panelists and some of the contingency
5 planning that they had done.

6 And I was reminded of some work that I
7 did, maybe 10 years ago, when the electric
8 utilities were beginning to get dependent on
9 natural gas and were very nervous about the
10 implications of that.

11 The Electric Power Research Institute
12 therefore got a series of studies going on the
13 relationship between the gas industry and power
14 generation. And for a period of time there were
15 three consultants, and I was one of them, that
16 were a part of that effort going forward.

17 One of the interesting things that
18 emerged from that was the very difference between
19 the way the electric industry and the gas industry
20 viewed dispatch, and how they dealt with short-
21 term transient phenomenon.

22 That was a period of time when the
23 Iroquois pipeline was going in, the northeast was
24 beginning to move from essentially a residential
25 space heating type of market to a mixed power

1 generating market, and growing very rapidly.

2 And there were lots of challenges to the
3 supply system in the northeast. And the industry
4 there voluntarily started out a process which I
5 was sort of reminded of when I heard the pipeline
6 group, and in fact EPRI decided that what was
7 going on there was a good model that ought to be
8 adopted nationwide.

9 What happened in the northeast is that,
10 essentially, the system operator, NEPOOL, all of
11 the major electric utilities, the gas distribution
12 companies, and the pipelines, formed a cooperative
13 committee, and they met monthly.

14 And they developed a series of
15 contingencies, sort of what would happen if this
16 occurred, what do you all do, how do you behave.
17 And they learned an awful lot from that process.

18 For example, one of the things that
19 surprised everybody is that, if the system went
20 down, the problem was in October of May. It
21 wasn't in July and it wasn't in December. And the
22 reason was each system assumed there was no
23 problem, and everybody has its maintenance man and
24 he was really relaxing during that period.

25 And so the challenging periods were in

1 May and September. That was something that nobody
2 really understood before that.

3 One of the questions was what happens if
4 you lose the Quebec tie line. What does everybody
5 do? Well, the system operator said here's who we
6 dispatch, the dispatcher said can you supply, and
7 you learned where all the problems were.

8 And in a sense I think that's kind of a
9 model for what you might want to look at. And
10 what I heard today sounded a lot like that, and
11 I'm saying that perhaps the only difference is a
12 cooperative one in which you develop real
13 challenges and try to see how everybody would
14 respond. That's what you do, and identify where
15 the problems really are.

16 The second part of the issue is the
17 question of open access, which we've heard an
18 awful lot about. I attended a conference about a
19 month ago in Quebec of a group called Canput (sp).
20 Canput is essentially the association of Canadian
21 regulators.

22 And Kenneth Vollman, who is the Chairman
23 of the National Energy Board, made a keynote
24 speech. And he made a very interesting comment.
25 He said "when I'm asked what my responsibilities

1 are as a regulator, as Canada's chief regulator"
2 he said "my responsibilities are protect and
3 enable."

4 Now, protection is very obvious.
5 Regulation exists because of monopoly power, it
6 essentially can be utilized to the detriment of
7 the consumer, and classically that's what
8 regulators have done.

9 It used to be that regulators worried
10 about price regulation, rate regulation,
11 increasingly with the re-structuring of the system
12 the interest has been more toward creating
13 workable competition as a substitute, more light-
14 handed regulation.

15 There's been a transfer, but regulation
16 is still all about protection of the consumer, and
17 that is essentially what you've grown up with in
18 this business.

19 Vollman said that that's what he grew up
20 with. And increasingly he has become aware of the
21 enabling function. And the enabling function says
22 that, if the regulators go through the process and
23 they decide that a project is worth doing, and in
24 the public interest, then it's his obligation to
25 try and push it forward and make sure it happens.

1 And I think the reason we're having
2 these meetings, in part, is because that enabling
3 role is beginning to surface. And the question is,
4 if this is good we ought to do it and we ought to
5 make it go forward.

6 If you on the panel have come from the
7 regulatory side, I'm a consultant who's worked on
8 the commercial side. And so, in a sense, I've
9 been much more sensitive to what it takes to
10 enable projects than I have the regulatory side.

11 And so let me bring essentially an
12 enabler's perspective to the equation, because I
13 think that's part of it.

14 You heard the people who are financing
15 the projects yesterday being somewhat nervous
16 about open access. And I share some of that. And
17 one of the reasons for that, and let me just tell
18 you, if you've had a long history of being in the
19 LNG business you have seen -- these projects are
20 fragile, they have a terrible history of, they are
21 complicated as you've heard, joint ventures among
22 several partners with disparate interests.

23 Most places, not Australia, but most
24 places you essentially have a national oil company
25 as one of the partners, who is in there both as a

1 tax collector and as an operator, which
2 complicates things, and it's like a committee
3 trying to make a decision.

4 And always somebody gets cold feet and
5 runs. And it has happened classically time and
6 time again. I'm saying it's very possible for
7 these projects to go down the drain if things
8 don't go right.

9 I worked on one project that looked like
10 a dead winner. When I sat at the negotiating
11 table with a partner, had it for almost a year and
12 it looked like a done deal. At the point where I
13 would call the client, and I would say "when are
14 we going to make the public announcement?"

15 "Well, we're doing the final details of
16 the contract, it'll probably be early next month."
17 That deal never happened. And that essentially is
18 the kind of thing that the people who have been on
19 the project side are sensitive to.

20 Now, when in a period of tie of supplier
21 euphoria. You look at these kinds of prices and
22 even bad deals look good. I mean, you can't make
23 a mistake. Well, maybe you can.

24 And that's, I think, if you've been
25 burned many times you sort of say "this can't

1 last" and somebody's going to make mistakes, and
2 if a mistake is made and some people have trouble
3 then all of a sudden the fear and the apprehension
4 hang over.

5 So essentially what I'm saying is that
6 when the company's come to you and tell you that
7 this might inhibit doing a deal, and might inhibit
8 an investment, clearly they're selling, and
9 clearly you've got to be skeptical, but there's an
10 element of truth there, because if you do
11 something inadvertently and the project goes down
12 you do not get that supply that will help you go
13 forward.

14 Now, the interesting thing I suppose
15 about the open access issue is that it
16 essentially, from the suppliers point of view he's
17 looking to have secure outlay, he wants to make
18 sure that he can sell the product, and so he wants
19 to make sure that he's got a guarantee of
20 throughput.

21 If you want to open some of that access
22 to a third party you either have to create excess
23 capacity in the system for them to utilize or
24 you're going to reduce the amount of the volume
25 that he's going to put on the market.

1 I think the question really for you is
2 what are you going to accomplish if you do have
3 third party access? Third party access came about
4 initially because the United States, which
5 pioneered it, and the UK, which pioneered it for
6 Europe, had surplus gas supplies, and they had
7 built infrastructure with spare capacity.

8 From the standpoint of a consumer,
9 that's ideal. Because the system could be opened,
10 once it was open the suppliers would compete for
11 market, and the consumers got the benefit directly
12 of that system.

13 Once you move into an environment of
14 building infrastructure the game changes somewhat.
15 It changes because you go to open season. And
16 what you're doing when you go to open season is
17 you're saying somebody must step forward, sign a
18 long-term contract to pay the debt service on the
19 contract, and if that happens then essentially it
20 is competitive.

21 But when the competitor ends up with the
22 project rights he may have them for the same
23 period of time as if he'd built them exclusively.

24 There was an open season on Lake
25 Charles. BG has signed it up. And what if BG had

1 billed it. To some extent it is different, it is
2 more competitive, but it is not quite the same
3 benefit that we got originally when we first
4 started open access.

5 So the critical thing I'm saying, not
6 that you're going to inhibit projects and they
7 won' go ahead ,but there is that danger. And you
8 should be very, very careful that you understand
9 what your goals are and what you're trying to
10 achieve when you do third party access.

11 And let me say one further thing about
12 the use of the European model. Because I think
13 precedents are interesting, but they have to be
14 put into historical context.

15 The re-structuring of the energy
16 industry took place very aggressively in the
17 United States, it took place very aggressively in
18 the UK, during a period when Reagan and Margaret
19 Thatcher were in love of free markets and all
20 those good things, and it became the model for
21 everybody to follow.

22 Of course the French didn't believe
23 that, they never have. But that was essentially,
24 free markets and all those benefits was the thing
25 we wanted to do.

1 The interesting thing about the UK is
2 that the UK at that point has some very cheap gas
3 in the central North Sea. It was very rich in gas
4 liquids, gas prices didn't make any difference
5 because what the guys wanted to do was produce it
6 and sell the gas liquids, and the gas was
7 secondary, gas was not responsive to price.

8 And so, essentially, as the British
9 liberalized, and they did it very aggressively,
10 even more than we did, they got all the benefits
11 of price competition.

12 And in their enthusiasm to tell their
13 retrograde partners on the Continent that that was
14 the way of the future they built the
15 interconnector to export their surplus to the
16 Continent, and that surplus was also supposed to
17 export competition and open the system in the
18 Continent to free market competition.

19 And the bureaucratic group in Brussels,
20 the directorate, has taken that to heart. That
21 crusade, they're very much in favor of, they're
22 trying to make sure that the pipelines in the
23 Continent are open.

24 And the problem is the pipelines on the
25 Continent are not that open yet. I mean, you

1 still have resistance among the French
2 governments, the Italian governments, the Gas du
3 France, and the Italians, and Brussels is fighting
4 the individual local governments to try and get
5 open access on the pipelines, which is essentially
6 the first fundamental that we have here and they
7 have in the UK.

8 In that kind of environment, obviously
9 Brussels the community can only really say we've
10 got to have open access. They can't really
11 retreat from the open access thing they're trying
12 to do on the pipelines.

13 And so that's one reason for their
14 continuing to do that. the interesting thing of
15 course in all that is that the UK went from
16 surplus, and it's going heavily into shortage.

17 And now, all of a sudden everybody's
18 saying wow, the UK is like California. We're
19 suddenly in need of LNG or new pipeline supply.
20 We're not exporting to the Continent anymore.

21 And it's interesting that the crusader
22 for free market open access, the UK, has now
23 become the first one to turn around and say well,
24 maybe we will in South Hook have a different
25 approach.

1 All I'm saying is that the European
2 precedent is in flux. Your problem is your
3 problem, and you've got to figure out what you
4 should do about it.

5 And you should be sensitive to the
6 concerns of the companies, that you might cause
7 these projects to fall. But you should also be
8 very clear about what you're really trying to
9 achieve with third party access, because you're
10 imposing a somewhat unknown risk in the process of
11 trying to do that.

12 And all I'm saying is weigh both things,
13 and weigh them sensitively. As I look at the
14 advantages of third party access one of the things
15 that the UK was concerned about was, you know, you
16 if you essentially authorize South Hook did you
17 give Exxon a big chunk of the British market?

18 And you heard my concern that the
19 California market is not so wide and deep for LNG
20 that you can put all kinds of terminals here and
21 not have a basis collapse. If you're going to
22 have many terminals come in you do run the risk of
23 having somebody with over-concentration of supply.
24 And that's an issue that has to be dealt with.

25 So that's kind of my bringing an enabler

1 perspective to the regulation process. And with
2 that I will shut up and answer any questions.

3 COMMISSIONER BOYD: I just want to thank
4 you for being here both yesterday and today.
5 You've been very helpful to me, although I think I
6 walk away from this still with you putting the
7 monkey back on our back so to speak with regard to
8 open access.

9 But I'm very taken with your protect and
10 enable, because -- and David and even others at
11 the table here might reflect on some of this. I
12 think California has been through some of both of
13 this.

14 When the electricity sky fell on us
15 there was also a mini gas crisis. Some people
16 though the gas situation caused the electricity
17 crisis. I never believed that and don't believe
18 that.

19 But there was a concern, and all the
20 protectors, the state agencies, did something
21 unique. They got together, and we created a
22 working group, and we became enablers of a lot of
23 the infrastructure projects that were underway at
24 the time.

25 And kind of behind the scenes sped

1 things up and facilitated and enabled. And
2 recognizing, I think many of us did, that the
3 market was a little different for gas and
4 electricity. We pulled our way through it
5 reasonably well, but I think this is a different
6 era.

7 I think we've all learned from that, and
8 I think the enabling mode is one that we recognize
9 as a role in the protect and enable
10 responsibilities of government. So I'm glad that
11 that's recognized elsewhere.

12 But I just want to thank you. I don'
13 have any questions, I'll look to the back table to
14 see if our other folks do.

15 MR. MORRIS: No, but I would like to
16 thank you for all your contributions. But I have
17 no questions.

18 MS. SCHWEBS: I'd also like to thank
19 you. It's been really wonderful to have your
20 participation here, and the ability to have lots
21 of speakers participation.

22 You need to realize that these speakers
23 have been volunteering their time, Jim Jensen's
24 time, to the state of California for gratis, and
25 we really need to thank people like him and others

1 on the agenda who have given the state of
2 California, and the federal government too, this
3 opportunity to give the best minds to these
4 difficult problems for California.

5 MR. MAUL: Well stated. Okay.

6 COMMISSIONER BOYD: Thank you, Jim.
7 We're going to hear from the public now.

8 MR. MAUL: Jim, thank you very much. We
9 really benefitted from your insight here.

10 All right, it's now 4:30. We have a
11 number of blue cards here.

12 COMMISSIONER BOYD: I'm going to take us
13 through the blue cards. I don't have my glasses
14 on, David, and I gave you those three cards that
15 have questions on them that are written in such
16 fine type that I can't read them.

17 So I'm going to delegate to you. But
18 let me go through the folks that want to say
19 something first while you figure out the
20 handwriting on the anonymous questions there.

21 The first card I have is Joe Armendariz,
22 the City Councilman of Carpinteria.

23 Ah, we didn't set up a microphone to
24 you. Well, while we take care of that, let me
25 just mention the next two names, Don Facciano of

1 Ventura Taxpayers Association will be next, and
2 following him will be Hank Lecayo of the
3 California Congress of Seniors.

4 MR. ARMENDARIZ: Members of the
5 Commission, I appreciate the opportunity to speak
6 with you today.

7 My name is Joe Armendariz. In addition
8 to my role as Executive Director for two non-
9 profit issues advocacy groups, the Santa Barbara
10 County Taxpayers Association and the Santa Barbara
11 Industrial Association, as you pointed out, I'm
12 also serving my first term on the Carpinteria City
13 Council.

14 Well, I'm here today representing my
15 personal views that the Cabrillo Port Project is
16 gaining widespread support in and around the
17 County of Santa Barbara because it is a rational
18 and responsible way to address California's
19 current and future energy needs.

20 Let's just say parenthetically that it
21 is significant when you consider that California
22 is growing by an estimated 600,000 new people per
23 year, and most of those are coming through the
24 maternity ward.

25 I support Cabrillo Port because it will

1 help meet a critical energy need for California.
2 Consider this: most of the other states in
3 America have superior access to the country's
4 natural gas production because they are closer to
5 the sources of supply.

6 This makes California, and Santa Barbara
7 County, more vulnerable to supply shortages in the
8 future unless action is taken now. By
9 constructing a state-of-the-art offshore facility
10 Cabrillo Port will be able to access the
11 substantial LNG resources of Australia and deliver
12 an affordable supply of clean natural gas and
13 power to homes and businesses throughout
14 California.

15 Federal Reserve Chairman Alan Greenspan
16 recently concluded that LNG would add a "safety
17 valve as protection against soaring natural gas
18 prices." And here are some additional facts.
19 Cabrillo Port will provide millions of dollars in
20 needed economic development and resources at a
21 time when California's need to be competitive
22 economically is obvious and clear.

23 The project will create hundreds of high
24 wage, high skill jobs, and support many local
25 community activities and organizations. Taken

1 together with payroll and sales taxes and rentals
2 and other operating expenses, the benefits to the
3 local economy from Cabrillo Port's operation are
4 estimated to exceed \$25 million every year.

5 Already the Cabrillo Port project has
6 donated tens of thousands of dollars to local
7 charities, community groups, and public education
8 programs to help further these organizations'
9 goals and activities.

10 I am confident that Cabrillo Port is
11 deeply committed to being part of the local
12 community and has earned trust throughout the
13 community because of a proven global track record
14 of giving back and investing in a better quality
15 of life.

16 I hope that a result of this workshop
17 will be a better understanding of the stakes
18 involved for taxpayers, job creators, and for the
19 economic future of California's families.

20 Thank you very much.

21 COMMISSIONER BOYD: Thank you. Don
22 Facciano?

23 MR. FACCIANO: Good afternoon, I think
24 it's still afternoon. My name is Don Facciano,
25 and I'm the President of the Ventura County

1 Taxpayers Association and also a board member of
2 the Ventura County Economic Development
3 Association.

4 I am here today to lend my support to
5 the Cabrillo Port LNG project. It's going to be a
6 win/win for both the taxpayers of Ventura County
7 and for all of California as well.

8 We all remember the disastrous effects
9 of the energy crisis, only a few years ago,
10 besides the embarrassment of the lights going out
11 our economy suffered a serious hit and taxpayers
12 were forced to foot the bill at a cost of hundreds
13 of millions of dollars.

14 While our state's energy crisis was a
15 complex issue, one thing everyone should be able
16 to agree on is the fact that California needs more
17 and better supplies of natural gas, because so
18 much of our state's electricity is derived from
19 natural gas it is both self-defeating and short
20 sighted not to do what we can to increase our
21 supply.

22 It's a fact that domestic natural gas
23 supplies are dwindling, and California needs new
24 sources of affordable, reliable and safe natural
25 gas to operate our businesses, warm our homes, and

1 cook our food. No one disputes these facts.

2 But somehow even those simple facts can
3 get lost in a complicated discussion. I hope that
4 some consensus can emerge from this workshop. I
5 realize that California needs a diverse strategy
6 to meet its energy needs. I do not suggest that
7 LNG is the only solution, but I do believe that it
8 must be part of any realistic plan.

9 It is an available supply, consistent
10 with our natural gas needs, and could be easily
11 integrated into our statewide economic growth
12 strategy.

13 You know, we looked at this project on
14 an unemotional basis and looked at just the facts.
15 I encourage everyone here today not to forget the
16 taxpayers, small business owners, entrepreneurs
17 who drive the engine of California's economy.

18 Please, do not burden them with an
19 uncertain and unworkable energy future. Please
20 support the Cabrillo Port LNG project as part of
21 California's forward looking energy strategy.

22 Thank you very much.

23 COMMISSIONER BOYD: Thank you. Hank
24 Lecayo? And you'll be followed by Jesus
25 Arrendondo.

1 MR. LECAYO: Good afternoon. My name is
2 Hank Lecayo and I'm the volunteer state president
3 for the Congress of California Seniors, which is
4 an advocacy organization serving 500,000 seniors
5 in our state.

6 For the past 50 years I've been also
7 involved in the labor movement on behalf of
8 working men and women and the less fortunate in
9 our society.

10 I've live in Ventura County for a good
11 number of years. I've seen this county grow and
12 develop from a small area known for being far
13 outside of Los Angeles to a thriving and
14 independent region with its own flourish and
15 economic industries and cohesive civic identity.

16 Right now I'm trying very diligently to
17 let people know about the proposed LNG facility at
18 Cabrillo Port in Oxnard. It is a realistic plan
19 that has the potential not only to bring a new and
20 necessary source of energy to Ventura County, but
21 to all Californians as well.

22 Here are the facts as I know them to be.
23 Cabrillo Port will receive liquified natural gas
24 carriers at its location 14 miles offshore.
25 Liquified natural gas is not delivered under

1 pressure, it is not explosive, and it does not
2 burn.

3 Once it is re-gasified offshore, at
4 Cabrillo Port, it will be delivered as natural gas
5 through pipelines exactly like those currently
6 under our city streets that have been safely
7 delivering gas to our homes for many, many years.

8 These new pipelines will be state-of-
9 the-art, using proven technology to deliver the
10 natural gas California needs to meet our
11 overgrowing energy needs.

12 Southern California Gas Company will
13 construct, own, and operate the offshore
14 pipelines, and that company has been safely
15 operating pipelines for decades.

16 In addition, pipeline systems like this
17 are also being used today in the Gulf of Mexico to
18 deliver natural gas. This workshop is important
19 because I believe well-intentioned people have
20 been speaking on both sides of this issue.

21 However, there is an indisputable bottom
22 line. California needs a steady and reliable
23 supply of natural gas right now. LNG is already
24 being used in many parts of the world. It is
25 getting a foothold in other parts of America.

1 It will be a shame if California falls
2 behind these innovative ideas and doesn't choose
3 to take bold action to take charge of its energy
4 future. I know it's been a long day, and I want
5 to thank you for allowing me to make these
6 remarks.

7 Thank you very much.

8 COMMISSIONER BOYD: Thank you, our
9 pleasure. Jesus? How badly did I damage your
10 last name there?

11 MR. ARRENDONDO: You were very good,
12 sir.

13 COMMISSIONER BOYD: After Dr. Woodrow
14 Clark will be next, but I'm going to let Dave read
15 a question after you speak. Go ahead.

16 MR. ARRENDONDO: Good afternoon. Again,
17 my name is Jesus Arrendondo. I represent CalCASE,
18 Californians for Clean Affordable Safe Energy.

19 And in the interest of time, and to
20 allow some of these folks to catch their flights
21 home, I would like to just read the names of
22 CalCASE member organizations that had intended to
23 speak in support of LNG today, and simply submit
24 their letters to the record for you to review
25 later.

1 They are the California Council for
2 Environmental and Economic Balance, Consumers
3 First, the Oxnard Chamber of Commerce, California
4 Retailers Association, California Restaurant
5 Association, and California Women for
6 Agricultural.

7 Together with the other 54 membership
8 organizations that are a part of the CalCASE
9 coalition we continue to urge you to support the
10 siting of LNG in California.

11 I thank you for your time and for a very
12 informative and productive workshop. Thank you
13 very much.

14 COMMISSIONER BOYD: Thank you for your
15 endurance too in sticking it out. Dave, you want
16 to read --?

17 MR. MAUL: All right. This is a
18 question from an unsigned blue card for Mark
19 Hayes, Mark, if you want to try to answer this one
20 you're welcome to either take a pass or try to
21 answer.

22 But the question is "on gas or LNG
23 prices in the future, given the developing couple
24 in the US between gas price and oil price in a" --
25 can't quite read it, something "parity" -- oh, "a

1 BTU parity basis, elaborate why gas price may go
2 down with more LNG=, given the potential for
3 higher oil prices, and considering that experts
4 believe that LNG terminals built in the US will be
5 limited to eight facilities and controlled by only
6 a few players?"

7 Did you get all that?

8 MR. HAYES: Uh, I don't profess to being
9 in the business of price predictions, so when any
10 question starts with that my first idea is to run
11 for cover.

12 That said, I think there are
13 fundamentals that go with that and I'd be happy to
14 comment on those, because the question is about
15 the oil-gas price linkage on a heating value
16 basis.

17 And I think I'm comfortable in saying
18 that, if you look at some of the numbers I showed
19 this morning and some other, some discussion
20 actually from Bill Powers with the Border Working
21 Group --.

22 I think some of the linkage that you see
23 in the market now between natural gas and oil
24 prices is actually a legacy of the global
25 contracting for LNG with explicit oil price

1 linkages. That's some of it.

2 But there is also direct linkages in the
3 marketplace, in the US, from switching that goes
4 on, where natural gas is a substitute for some of
5 the oil products. So there's going to be that
6 linkage there.

7 I think the question is, and I think Jim
8 has talked about this at different times, the
9 question is where and which fuel product, which
10 petroleum product is natural gas substituting for.

11 And you have an environment, some
12 environments where natural gas is trading at BTU
13 parity, then it's basically with the higher value
14 fuel products.

15 But you can get back to a world where
16 we've come from for the last two or three decades
17 in this country where it's actually competing on
18 the margins with lower values, say high sulfur
19 fuel oil or residual fuels.

20 And you can get to that environment I
21 think with maybe eight terminals. I don't know
22 what the number is in the US. But a more
23 competitively supplied gas market in the US I
24 think can bring you to a different point in terms
25 of the linkage between the natural gas and the oil

1 markets.

2 COMMISSIONER BOYD: While you're
3 standing there on this point, I've just related to
4 this question. It's my feeling that to some
5 degree -- certainly it was true in California --
6 it was not economic, it was air quality
7 regulations that drove us out of burning fuel oil
8 in boilers to natural gas.

9 And it's my feeling that that's a trend
10 that spread many years later, and is spreading
11 throughout the country. And therefore it's not so
12 much a matter of economics.

13 And that should cleave the pricing
14 mechanism apart somewhat, but it hasn't seemed to
15 work. Any reaction?

16 MR. HAYES: Well, that's an interesting
17 perspective. I think, if you're concerned about
18 there's certainly that environmental perspective
19 and I think that stuff has been going on.

20 If you look at a lot of the actually
21 explicitly, historically, actually the Europeans
22 are going in the other direction saying we want
23 fuel flexibility in those facilities to guard
24 against interruption in supply and price events.

25 But effectively in the US we've

1 certainly been going in the direction that you
2 indicate. If you're concerned about price
3 volatility then having some flexibility in the
4 system, some dual fire capabilities, or just
5 abilities in the electrical power system to switch
6 between, if it's not oil some other fuels, having
7 some flexibility gives you a better ability to
8 respond to price events as they come along.

9 But I --

10 COMMISSIONER BOYD: But sometimes the
11 environmental issues trump the economic issues.

12 MR. HAYES: Absolutely, absolutely.

13 COMMISSIONER BOYD: All right. Thanks.

14 Woody, Woodrow Clark.

15 MR. CLARK: I see a lot of very familiar
16 faces. I want to thank the Commissioner and also
17 the CEC staff for giving me a few moments to
18 speak.

19 I have probably eight points to make and
20 I know you don't want to sit here and listen to me
21 for another hour, so I'm just going to urge you to
22 read my book, which was done -- and let me just
23 explain for those of you who don't realize -- I
24 was Senior Policy Adviser in Energy Reliability
25 under the Davis Administration and worked directly

1 on some of these issues.

2 And after I was recalled, along with a
3 few other people, I did a book called Agile Energy
4 System, where I was addressing some of the issues
5 discussed today.

6 And I want to say, basically in summary,
7 I had a number of points to make from what I heard
8 this afternoon, and I apologize for missing the
9 first day and a half of the deliberations. But I
10 just want to address a couple of things.

11 And I thought Mr. Jensen, you hit a
12 number of them right on the target. The subtitle
13 of my book is Global Lessons From the California
14 Energy Crisis.

15 So the first thing I would like to do is
16 urge the Commissioners and others to go see a
17 film, it's in your local theater, it's called
18 Enron, The Smartest Men In The Room.

19 I mention that because what I've heard
20 here this afternoon, and from what I've seen in
21 tracking this issue now for several years and
22 having served on the task force that Commissioner
23 Boyd had mentioned before on natural gas, a very
24 parallel situation that we are following today.

25 The notion of protect and enable. I use

1 a term called civic markets. Meaning we have to
2 have a marriage, a collaboration, between the
3 markets and also between government.

4 It can't be one or the other, and we
5 have to work on these issues together to come out
6 with some kind of, not just so much compromise,
7 but as Commissioner Boyd just mentioned, keeping
8 in mind that environmental issues are extremely
9 important, had not been pointed out this
10 afternoon, and I wanted to point out a couple of
11 reasons why they should be.

12 But more importantly the cost, today,
13 will always come down tomorrow. All we have to do
14 is look at the history of natural gas costs in
15 terms of exploration, in terms of shipping, in
16 terms of transmission, and now in terms of LNG,
17 and we can all see that those costs indeed will be
18 coming down.

19 But let me just make a couple of points
20 based on what I had heard this afternoon. The
21 first one is the environmental issue. No one's
22 addressed the issue. And let me be categorically
23 clear about this.

24 I am ultimately, categorically opposed
25 to LNG coming to California, let alone Mexico, let

1 alone Oregon, we can keep going up and down the
2 coastline if you will and other parts of the
3 United States.

4 And I say that because the first point
5 I'd like to make to everyone in the audience, and
6 I was rather surprised to hear people from Ventura
7 County in favor of this, because I don't believe
8 the economics, which is my first issue, are there.

9 And let's take in one point that I make
10 in the book, and I'd like to mention what I've
11 heard today. And that is, we've spent the entire
12 afternoon, and I'm sure the last two days, on
13 talking about natural gas.

14 What we should be talking about is the
15 alternatives to natural gas. What we should talk
16 about is that investment on a 20 year contract
17 with the construction of ports in the billions of
18 dollars, what those resources could be put to in
19 other areas.

20 Whether it has to do with the natural
21 resources we have in this state, such as wind and
22 solar, but also the untapped resources that we saw
23 in the pipelines in geothermal. I mean, going
24 right directly to the El Paso area through the
25 Salton Sea and the southern part of Imperial

1 County.

2 What we've got to do is start talking
3 about what other resources do we have, and do we
4 want to become more dependent on natural gas. The
5 state now, currently -- and I think the latest
6 figures now are somewhere about 54 or 56 percent -
7 - dependent on natural gas. And I think what
8 we've got to do is look at other resources.

9 My second point is that that puts us
10 directly into the issue of what is public policy.
11 I believe that Governor Schwarzenegger has made it
12 very clear, even as of last night, that he wants
13 to see the state become not only just energy
14 independent but using renewable energy in regard
15 to environmental and climate issues.

16 If we're going to do that let's talk
17 about the 20 year scope that he's talking about.
18 That's in 2025. What do we have that's more cost-
19 effective to bring for power and energy supply
20 that's stable into the state of California in that
21 same 20 year period, and also with long-term
22 contracts.

23 Commissioner Boyd and I sat through
24 many, many meetings over the last six years
25 listening to people talking about long-term

1 contracts for wind, for solar, for other fuel
2 sources like geothermal and biomass.

3 All of which we are very knowledgeable
4 about and know that those supplies would be
5 alternatives to what the current suggestions have
6 been in the last day. And I might add, going on
7 in the last few months.

8 And my final point, and as I said I
9 could go on forever with this, is that I believe,
10 again Mr. Jensen made an extremely good point, and
11 I'd like to challenge some of the earlier speakers
12 today in terms of the facts.

13 A year ago May I was in Seoul, Korea at
14 a conference on LNG. I'm telling everybody in
15 this room now, and I can verify it, I would even
16 suggest to the Commission that you put together a
17 group that does a due diligence, does auditing and
18 investigation of people who document or say that
19 they are presenting facts.

20 The issue of LNG in South Korea is very,
21 very difficult. More importantly, at that
22 conference, there was a speaker from one of the
23 major insurance companies in the world who said,
24 and I will quote him now, "they will not insure
25 LNG facilities."

1 That appeared in the press under another
2 insurance company not more than three months after
3 this statement was given to me about a year ago.

4 Then let's get to the other point that
5 Mr. Jensen made that I'd like to make very clear
6 to everybody. The issue about deregulation, about
7 privatization, about the whole notion of
8 regulation or non-regulation worldwide -- and he
9 mentioned a bit about the history out of the UK.

10 I would like to point out to people in
11 this room that there is very serious discussion
12 going on in Europe and other parts of the world
13 about the experiment that we had tried here in
14 California.

15 And those investigations and those
16 discussions about it have stated, in effect, it
17 was wrong. And for us to engage in another area,
18 in natural gas, either deregulating it or allowing
19 so-called market forces to take place, I think is
20 a very, very tragic mistake.

21 And again I urge you, if you will, I
22 will pay for the going to see the movie called
23 Enron, The Smartest Men In The Room, it's a very,
24 very interesting film and I think very
25 enlightening and very informative.

1 One final thing, aside from the book and
2 everything else, I've also been very much involved
3 with energy issues in Southern California as the
4 Energy Director of the LA Community College
5 District. I'm a Senior Fellow at the Milken
6 Institute, and also a Adjunct Professor at
7 Pepperdine University in the Graduate MBA Program.

8 I mention all of that because I'm very
9 much involved in looking at economics and
10 statistics and policy making. So I want to really
11 urge the Commissioners to put together some kind
12 of task force to really look at these numbers
13 objectively and be able to say "look, we have
14 weighed all sides and not just taking someone's
15 opinion or someone's report or some lobbyist
16 group."

17 Thank you very much.

18 COMMISSIONER BOYD: Woody, we've been
19 plowing through this for the three years I've been
20 Commissioner. And sorry you missed the other day
21 and a half.

22 Dave Puglia, Western Growers, followed
23 by Rock Zierman of the Natural Gas Producers
24 Association. And I think you have a couple more
25 questions, and I have no more blue cards.

1 MR. PUGLIA: Thank you for the
2 opportunity to comment. I'll be very brief, I
3 know you've had a long couple of days.

4 My name is Dave Puglia, I'm a Vice
5 President with Western Growers. We are a two
6 state organization of 3,000 plus growers of fresh
7 fruits, nuts, vegetables and also shippers,
8 packers, and others involved in bringing those
9 products to market.

10 We're a major part of California's \$27
11 billion agriculture industry, and next to water,
12 affordable electricity and an adequate supply of
13 it are as critical to our success as anything.

14 We are price takers and not price
15 setters, as I'm sure you know. Our products'
16 price is set by world supply. Frequently we are
17 undercut by foreign markets where labor costs are
18 cheaper, energy costs are cheaper, transportation
19 costs are cheaper.

20 So every incremental increase our
21 growers see and our processors see in energy costs
22 is coming right out of their hides and undercuts
23 their ability to stay in business in this state
24 and contribute in a major way to this economy.

25 We are energy intensive, contrary to

1 maybe first blush, from pumps that bring water
2 into the field to the sorting and the cleaning of
3 the product, testing of the product, packaging of
4 the product, and of course refrigeration of the
5 product all the way to market.

6 Additional natural gas supply is a must
7 in our view. When we look at the continuing
8 growth, not only in California for the demand for
9 natural gas, but also in the western states that
10 surround us.

11 As I mentioned earlier we represent not
12 only California growers but also Arizona growers,
13 and the industry there is thriving and growing as
14 well. Of course those western states tap in to
15 that pipeline grid that we were discussing
16 earlier.

17 We are concerned that, as we look down
18 the road, California will be left without adequate
19 supply. We do believe that offshore terminal
20 siting is a responsible way to go.

21 We know the Commission has a lot of work
22 to do. We'd be happy to help in any way we can,
23 but we appreciate this workshop and the progress
24 that's being made, and we stand ready to assist
25 you in the future. Thank you.

1 COMMISSIONER BOYD: Thank you very much.

2 MR. ZIERMAN: Commissioner Boyd, members
3 of the panel. Rock Zierman, California Natural
4 Gas Producers Association.

5 California's instate producers of
6 natural gas are working hard to find new sources
7 of instate natural gas. Our drilling activity in
8 the gas patch increased by 65 percent last year,
9 and our success rate was 71 percent, an all-time
10 high.

11 Having said that, however, we continue
12 to produce less than a BCF of gas a day in the
13 state of California, and our demand is six and a
14 half. And as a result we understand the need for
15 conservation and new sources of energy, chief
16 among them LNG.

17 We're working hard to eliminate the
18 impediments in state production, with the
19 assistance of the Energy Commission. But the
20 prospect is that we can only marginally increase
21 by a few percentage the instate share of the
22 overall pie.

23 In addition to being instate producers,
24 instate producers of natural gas are also heavy
25 users of natural gas, so we have an interest just

1 like everybody else in a stable price, and as a
2 result support LNG. Thanks.

3 MR. MAUL: The last two blue cards are
4 written in even smaller handwriting, and therefore
5 are even more difficult to read. But, they're
6 from Andy Weissman, both questions are for Andy,
7 but I don't see him in the room right now so I'll
8 just read them into the record and we'll look for
9 him to handle them later.

10 The first question is "during the last
11 two to three years a significant shift in new
12 investment by oil/gas companies has occurred away
13 from" -- hhmhm, can't read that one -- "from the
14 mature Gulf of Mexico shelf to tight rock onshore"
15 something or other.

16 "According to those companies the shift
17 was predicated on better opportunities, decline
18 rates, and more stable production. A survey of
19 those companies recently by investment analysts
20 showed that none looked ahead at the impact of
21 imported LNG as a factor to their new investment
22 decision."

23 "Therefore, please provide hard evidence
24 for the trend you suggested, that is that ENP
25 companies are slowing investment if concerned of

1 the impact of LNG."

2 Next question is also for Andy Weissman:

3 "since 1990 the price differential between Henry
4 Hub and Japan and Europe has closed, such that by
5 2003 the US, on average ,paid a premium to the
6 markets. In effect, US gas prices began to couple
7 with alternative fuel rates on a BTU parity
8 basis."

9 "In this world how would the US be
10 disadvantaged in the competition for LNG."

11 Hopefully Andy can answer those
12 remotely.

13 COMMISSIONER BOYD: Okay, I have no more
14 blue cards, but is there anyone in the audience
15 that wanted to say something that didn't get to
16 sign up?

17 If not, I again want to thank all of the
18 panelists, all of the speakers, and everyone for
19 their patience in attending these two days. It's
20 been extremely interesting to us up here and I
21 hope it has been to you.

22 My only criticism is of the folding
23 chairs they provided us up here. I couldn't
24 endure much longer up here, quite frankly.

25 But, in any event, this has been

1 extremely enlightening and I want to thank the
2 staff of the Energy Commission for the good work
3 they did in putting this together for us, and
4 their choice of panelists and the work of the
5 panelists.

6 So, with that I would ask if any of my
7 fellow panel members would like to say something,
8 and then we can call it a day.

9 MR. MAUL: Yeah, on behalf of the
10 California Energy Commission staff and the CPUC
11 staff, we are very pleased to have all the folks
12 come to talk to us. We've gained quite a bit of
13 information from them.

14 We encourage any other parties to
15 provide written materials to us. We will leave
16 the record open until June 15th to accept more
17 information of any kind, and we will be posting
18 all of the materials that we have received to date
19 and will be receiving by that date.

20 Following that, we will be preparing a
21 summary of these two days, as well as the
22 materials we did receive, and try to package
23 everything together so it's a more readable,
24 coherent set. And we're going to try to have that
25 done by the middle of next month, the middle of

1 July.

2 Again, we thank you for all your time.

3 Commissioner, your endurance in going through all
4 this. And I did want to really point out that the
5 folks who really made this thing work were two
6 individuals, Mary Dyas in the back -- Mary, if
7 you'd raise your hand -- Mary did a tremendous
8 amount of work helping to put all of this
9 together.

10 And also Monica Schweb from our Legal
11 Office did a tremendous amount of research, even
12 going so far as to put together a bibliography of
13 reading material, which is also on our website.

14 An enormous amount of material that she
15 had researched, hopefully to further our joint
16 education for all this information s o we could
17 make a better decision.

18 But thank you to both of you for putting
19 on such great work.

20 Thank you very much, and that closes our
21 two day workshop. Thank you.

22 (Thereupon, the workshop ended at 5:00 p.m.)

23

24

25

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I, PETER PETTY, an Electronic Reporter,
do hereby certify that I am a disinterested person
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